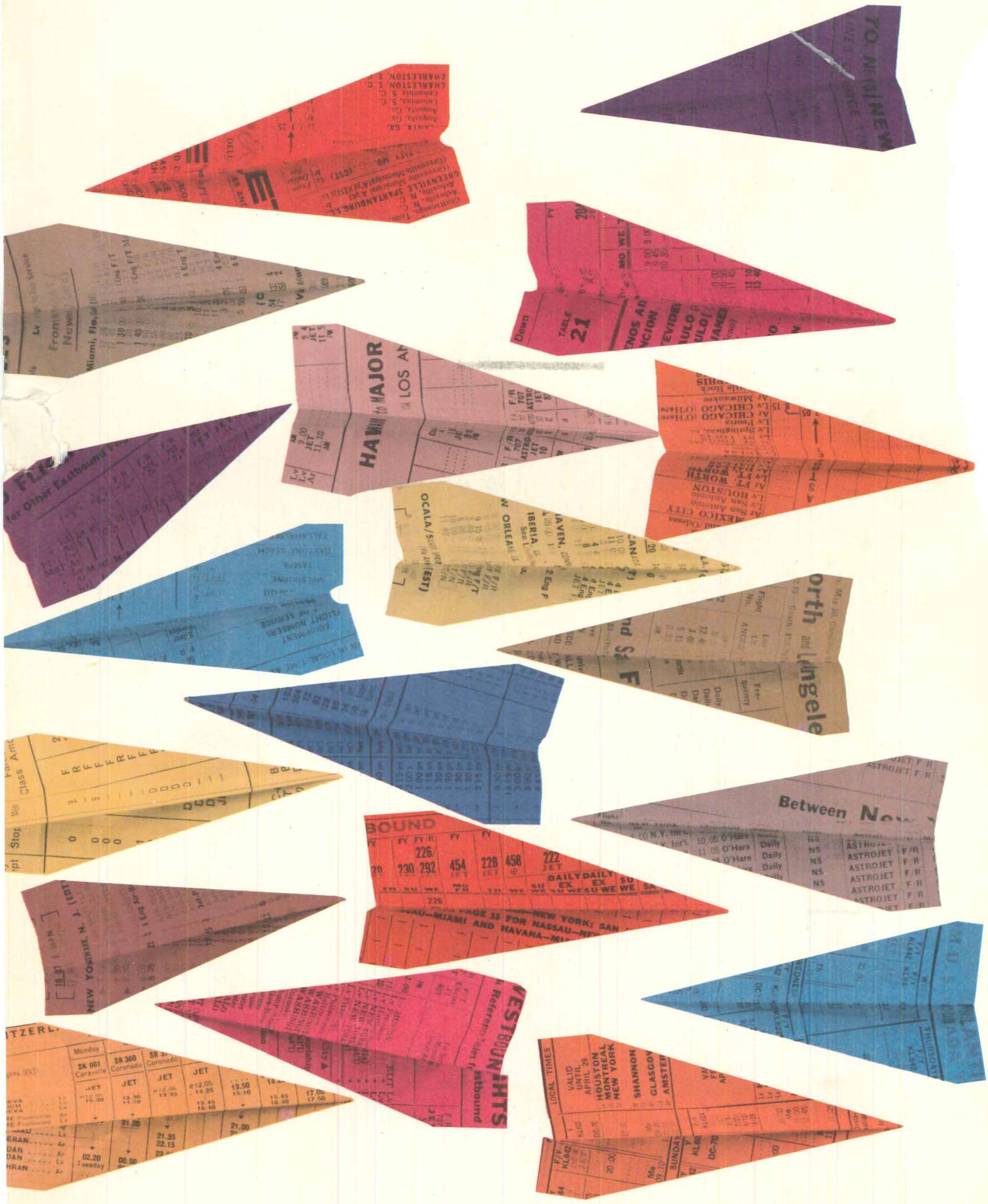
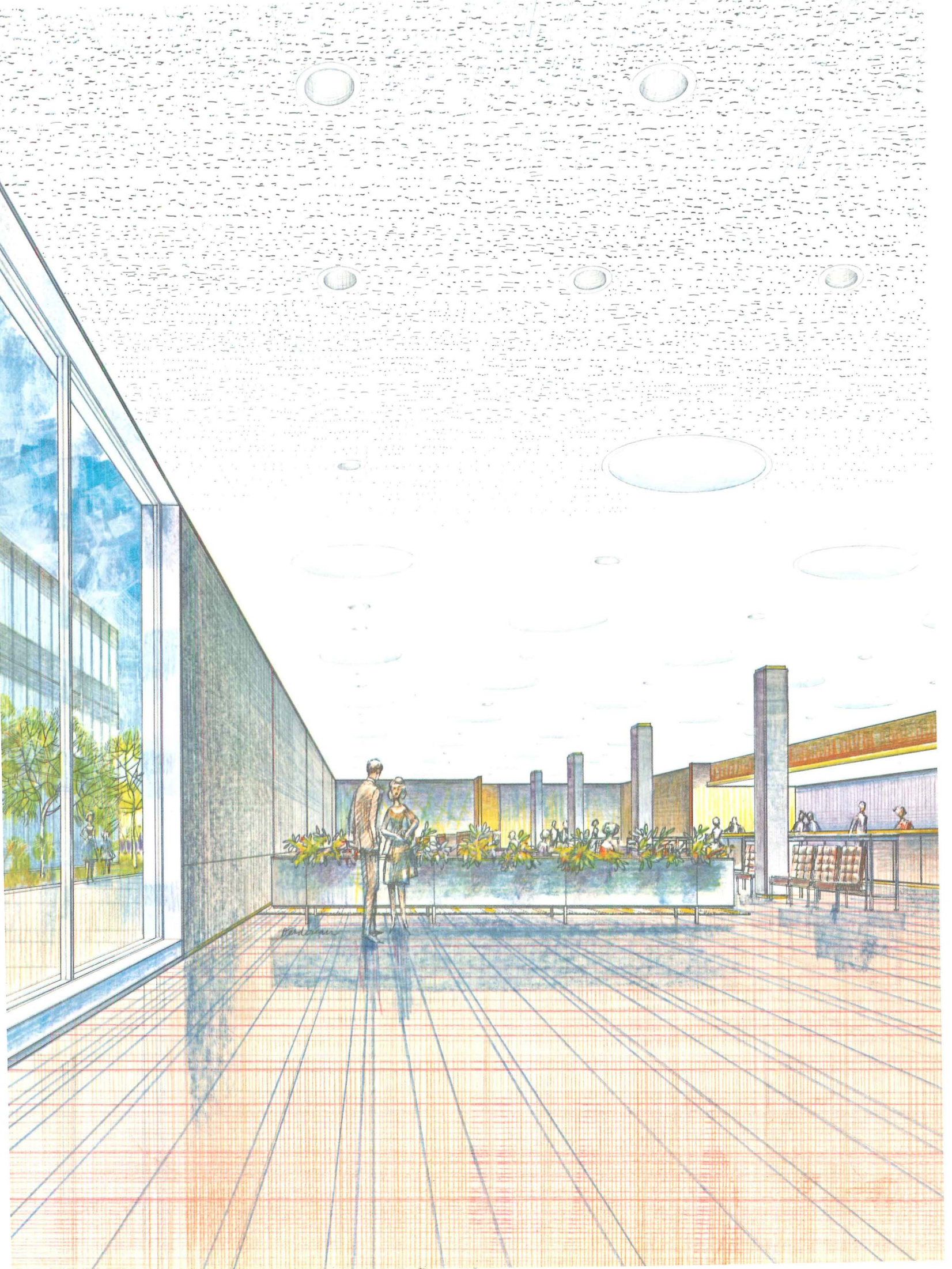
RCHITECTURAL FORUM THE MAGAZINE OF BUILDING JULY 1962

FORUM





At last: a federal architectural policy (below)
Cannon booms in Philharmonic Hall (page 7)
New hope for FDR Memorial (page 9)
Urban freeway convention stresses design and teamwork (page 11)

ARCHITECTURAL POLICY IN WASHINGTON

The Kennedy Administration has consistently indicated its approval and understanding of the importance of the arts. No single step, however, has been more important than its announcement last month of plans for a large federal office building program incorporating the best principles of architectural design, and for the rehabilitation and rebuilding of Pennsylvania Avenue (right). These recommendations by the Ad Hoc Committee on Federal Office Space have been approved by the President and passed along to government departments for "immediate study and appropriate action."

Tempos will finally be razed in major rebuilding plan

Recognizing that the problem of office space in and around Washington, D.C. is acute, the Committee noted that "virtually all the space in the temporary and obsolete categories [totaling about 9.5 million square feet] is substandard." To replace the tempos and obsolescent buildings, some 9 million square feet will have to be constructed over the next ten years. Similarly, the Committee proposed that an additional 3.5 million square feet be constructed to offset the increase in federal government employees, and another 787,000 square feet be built to supplant office space presently leased for $12.6 million in fiscal 1963. This adds up to 13.3 million square feet in construction at an estimated $425 million.

"The belief that good design is optional," the Ad Hoc Committee wrote, "does not bear scrutiny, and in fact invites the least efficient use of public money." Thus, the design of federal office buildings should meet "a two-fold requirement": It should provide "efficient and economical facilities for the use of government agencies" and also "provide visual testimony to the dignity, vigor, and stability of the American Government."

A three-point architectural policy for the federal government has therefore been proposed:

- "Major emphasis should be on choice of designs that embody the finest contemporary American architectural thought. . . . Where appropriate, fine art should be incorporated in the designs."
- "The development of an official style must be avoided. Design must flow from the architectural profession to the government, and not vice versa. . . . Competitions for the design of federal buildings may be held where appropriate."
- And "The choice and development of the building site should be considered the first step of the design process. . . . Special attention should be paid to the general ensemble of streets and public places of which federal buildings will form a part."

Washington's grand axis

One site especially attracted the Committee's attention. This is Pennsylvania Avenue — originally planned by Pierre L'Enfant to be "the grand axis" of the city, now an example of "lamentable disharmony," which features "block after block of decayed nineteenth-century buildings, many of which are vacant above the first story, only rarely interspersed by partially successful attempts at modernization."

To upgrade the north side of Pennsylvania Avenue, the federal government has already announced its plans for a $60 million F.B.I. office building there and Downtown Progress has started a drive to attract private capital into the area. The report emphasized that Pennsylvania Avenue should not be like the Federal Triangle, a district which shuts down entirely after working hours; instead, the avenue "should be lively, friendly, and inviting, as well as dignified and impressive."

All work done by the federal government under the new program will be directed by the National Capital Planning Commission, and an advisory committee composed of eight or ten members specializing in architectural matters will be announced by the White House in the near future.



ALBERT FENN—LIFE

Pennsylvania Avenue

A brighter outlook

Government departments are now under orders to follow the President's new policy in their new buildings. Skeptics, however, point out that Congress, which controls appropriations, can impede realization of the proposals if members do not like the design. Funds have been previously withheld — notably in the State Department's program of building modern embassies abroad. Still, a first—and all important—step has been taken.

BEARISH MARKET AND BUILDING INDUSTRY

One Wall Street real-estate specialist put it this way: "In a bearish market, the investor gets cautious—and real-estate stocks, being speculative, don't attract him." Real-estate stocks, like other glamour stocks, did slump last month. Real-estate trusts and other building companies, thus, will hesitate before going on the market.

Part of the money leaving the market, however, may go into savings accounts because of the high interest rates there. This movement might exert further downward pressure on mortgage rates, which, economists agree, will certainly not increase.

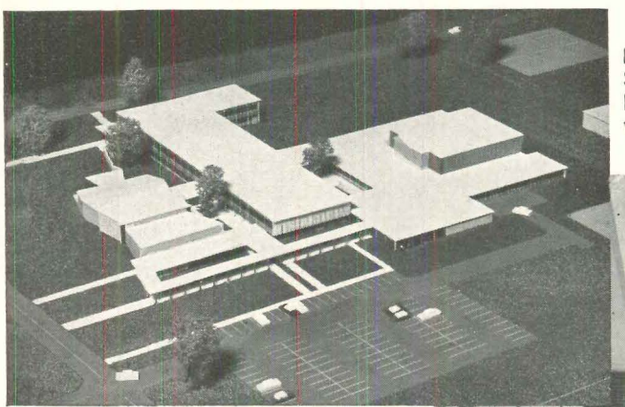
Other experts predict that the stock market break may defer many real-estate purchases and home building plans—particularly by those buyers who suffered losses in recent market activity.

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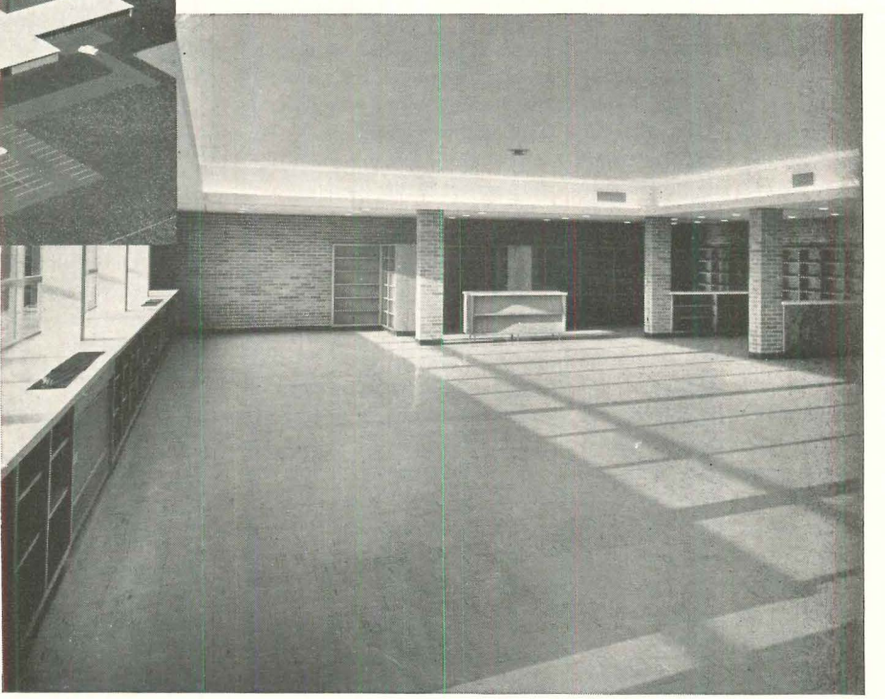
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Left: Frank R. Starbuck Junior High School, Racine, Wis., opening Fall, 1962, has a capacity of 1000 to 1100 students, will cost approximately $2,275,000.



Right: Marbleized Vinyl Asbestos Floor Tile in golden tan keys the decorative scheme in the library.

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continued from page 5

One possible result of the break: the Treasury, which had announced that liberalized depreciation rules would no longer benefit the building industry, might reverse this position. Thus, the Administration might help erase the President's "antibusiness image" to which the stock market's decline has been linked.

Building economists in Washington add other related thoughts. FORUM Consultant Miles Colean sees no change in capital expenditure plans by companies. Economist Robinson Newcomb adds that most capital expenditure projects will be cases where some cost cutting can be achieved or a new product is involved. Capacity, he says, exceeds requirements in most industries now.

TUNING WEEK AT PHILHARMONIC HALL

"The acoustical design of a concert hall is part science and part experiment," said Acoustical Consultant Dr. Leo L. Beranek. "We can select the cubic volume [in this case, 850,000 cubic feet] and gross shape [rectangular cross section, narrow width, high ceiling, gently sloping floor] scientifically. But many of the interior details are experimentally arrived at during a tuning period."

What Beranek was talking about last month was Architect Max Abramovitz's $15.4 million Philharmonic Hall in Manhattan's Lincoln Center. The occasion: the first experiments ever made in tuning a concert hall before it opened to the public. After visiting 54 major concert halls in the past seven years, Beranek had collected data on what makes a hall sound well and what does not. Then came an intensive "tuning week" at the Philharmonic Hall, for which a special composition had been commissioned: "Cataacoustical Measures" by Composer Daniel Pinkham, in which "modern" orchestral music builds up only to come to sudden, reverberating halts.

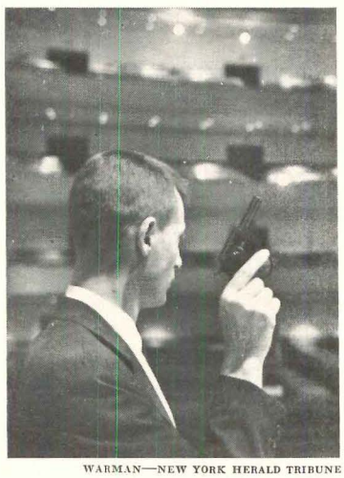
The tuning week started off, appropriately enough, with a bang —the firing of a blank charge out of a cannon (a sound that contains a broad band of frequencies). Reverberation time was measured constantly throughout the tuning of the hall, and the goal of 1.85–1.95 seconds with a full audience at mid-frequency range was achieved.

This figure had been empirically predetermined in a comparison of the acoustically best halls. Among them: Boston's Symphony Hall, Amsterdam's Concertgebouw, and Vienna's Grosser Musikvereinssaal.

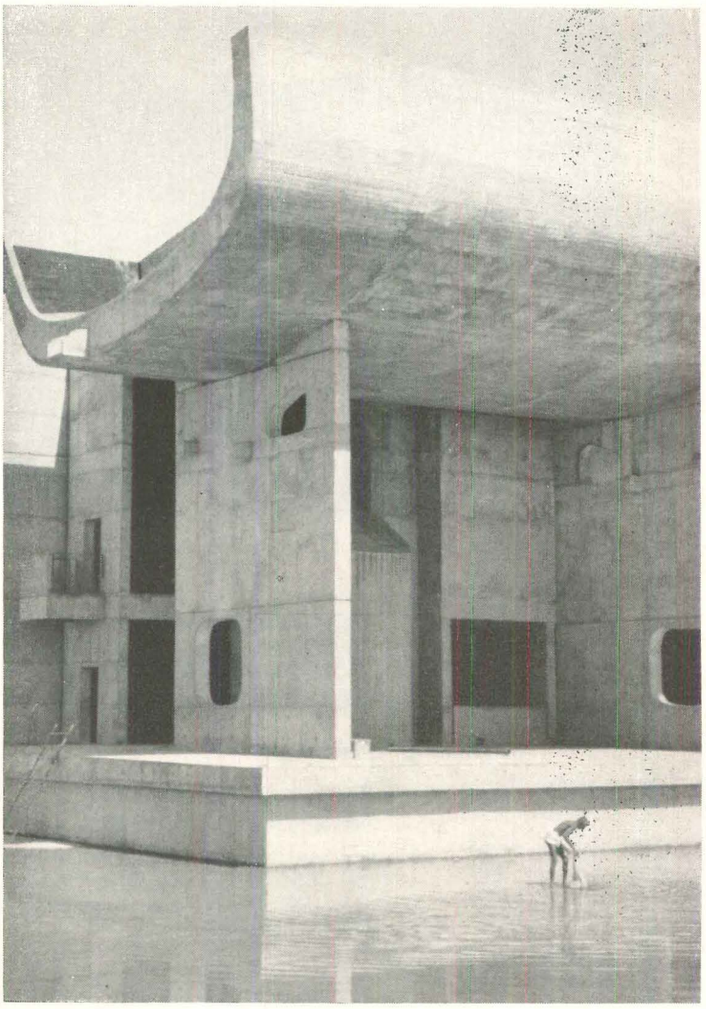
In order to control the experiments, each seat in Philharmonic Hall was occupied by a glass-fiber mat to approximate the absorptive quality of a human body. The 106 acoustical panels suspended from the ceiling were readjusted and stage-level panels were arranged to either reflect or absorb sound behind an acoustically transparent, optically opaque screen. Complex electronic equipment (including two dummy heads with binaural "ears") was placed throughout the hall to catch all acoustical nuances.

After a week of noises ranging from euphony to cacaphony, from "white sound" (containing all audible frequencies) to a pistol shot (see photo), everyone seemed to be pleased—even the traditionally finicky musicians.

Said Abramovitz: "We now have a chance of really knocking off a great hall." Said Beranek: "The tuning week was completely successful"; but he added cautiously: "The tuning process will continue for a year."



WARMAN—NEW YORK HERALD TRIBUNE



RON PARTRIDGE

LE CORBUSIER'S CHANDIGARH ASSEMBLY BUILDING IN USE

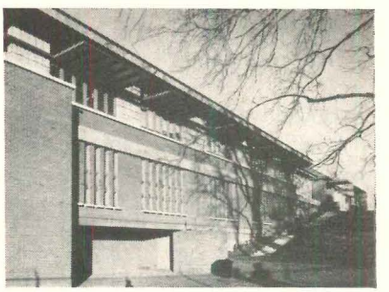
Above is the third government building completed by Le Corbusier in a complex of four planned for the northern section of the new city of Chandigarh, which replaced Lahore as capital of the Punjab, India. The plan of the building is square, but the assembly hall within is round, with a hyperbolic concrete funnel rising well above the level of the roof to terminate in an oblique skylight with an aluminum framework. This view of the portico shows the monumental scale of the building as well as Corbu's use of sculptured forms to provide a lively composition of solids and voids, of changing shadows and light. The Secretariat and High Court buildings have already been completed. Still to come is the Governor's Palace.

WATERGATE TOWNE NEARING APPROVAL

After eighteen months of controversy, tentative agreement on the $50 million Watergate Towne project in Washington, D.C., has been reached. Objections raised by the Commission of Fine Arts (FORUM, June '62) have been answered; compromise solutions have been accepted. The Italian developers, who brought Architect Luigi Moretti from Rome for discussions, scaled down the residential-commercial project's size by about 7 per cent (from 1,911,000 to 1,730,000 square feet) and agreed to keep 75 per cent of the structures under 130 feet high. Result: the Commission of Fine Arts endorsed the design on May 28, and the District Zoning Commission gave a tentative go-ahead to the project the following day. Final approval is to be withheld until the developers submit detailed revised plans incorporating the compromises.

continued on page 9







Petrolite Corporation General Offices, St. Louis. *Left to right:* Fred F. Hubler, *Advertising Director,* Petrolite Corporation. Charles H. Zurheide, Smith, Zurheide & Associates, *Consulting Engineer,* John C. McEwen, Rodriguez Design Asspciates, *Architect.*

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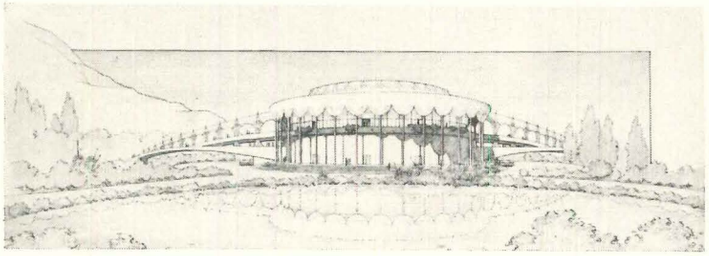
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REPRESENTATION THROUGHOUT UNITED STATES EXPORT: ROLDAN PRODUCTS CORP. ST. LOUIS

continued from page 7



Grady Gammage Auditorium

FLLW'S LEGACY: PROJECTS AND SKETCHES

One could never really tell how successful a Frank Lloyd Wright project would turn out to be until it was actually constructed. What may have looked flamboyant, or even fantastic, in two dimensions, often appeared entirely suitable and splendid in concrete, brick, steel, and glass. A case in point may be one of the last projects sketched out by the master before he died: the Grady Gammage Memorial Auditorium (above) for the Arizona State University at Tempe. Some of the members of the University's board of regents three years ago called it "a merry-go-round!" "Disneyland!" and "a mausoleum!" (FORUM, Aug. '59).

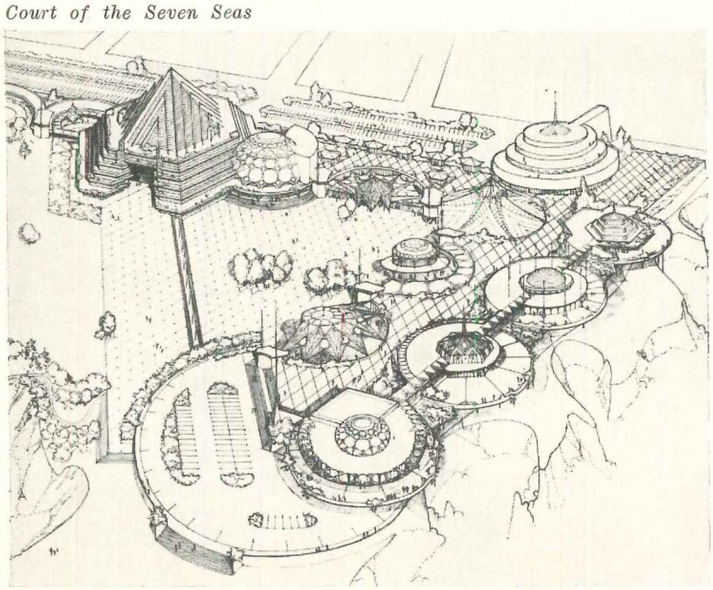
Others were enthusiastic; and on May 23 at ground-breaking ceremonies a board member said: the auditorium "will bring into reality what was perhaps the last great concept born of the matchless genius of the late Frank Lloyd Wright."

It is a big building—304 by 235 feet—and will cost $2.8 million. Named in honor of the man who served as ASU president for 34 years, the auditorium should be completed by late 1964. Catching much of the flavor of Wright's Baghdad Opera House, it features a belowground-level stage, and seating for nearly 3,000.

Out on the West coast, at sunny Santa Cruz, Calif., Taliesin Associated Architects have designed an "International Village and Court of the Seven Seas." The spectacular hotel-shopping center complex is sponsored by International Village, Inc., controlled by far-sighted Businessman Peter J. Pasetta. Cost of the project will be between $13 and $15 million.

As now planned, the Court of the Seven Seas (below) includes: a hotel (the 200-foot-high pyramid crowned by translucent ceiling), a motel (the two-story semicircular buildings), a chapel for the wedding trade, and a convention hall (the large translucent dome). The International Village of the Seven Seas, a super shopping center containing "the Court of Asia, Court of the North Atlantic," etc., runs along the shore line in a series of domed canopies.

Court of the Seven Seas

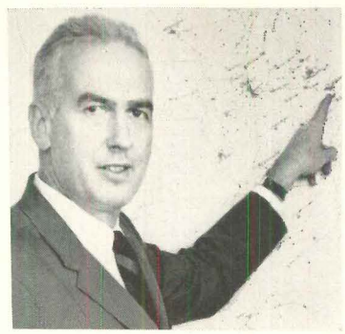


SURPRISE HELP FOR ROOSEVELT MEMORIAL

FDR Memorial Commission Chairman Francis Biddle still has a bill before a House Administration subcommittee requesting Congress to approve the eight-slab monument and to authorize it to be built with $5 million of private donations—despite the fact that the Federal Fine Arts Commission has turned it down (FORUM, April '62). Also pending in Congress, however, is a bill to create a national park along the Potomac River as an FDR Memorial. So the proponents of the eight-slab monument designed by Architects Pedersen & Tilney did not expect much aid and comfort from the House Committee when it held hearings on June 8. They were pleasantly surprised.

Although the monument is about as far away from construction as ever, the hearings were somewhat encouraging. This was due mainly to the articulate and witty support of Representative Frank Thompson (Dem.—N.J.).

With Architect John Harbeson on the witness stand to argue against the eight-slab monument, Thompson noted that Harbeson's firm had designed the new House Office Building dedicated to the late Speaker Sam Rayburn. Once this was established, Thompson proceeded to challenge Architect Harbeson's qualifications as a judge of good design. The Rayburn Building, said Thompson, is "massive [and] ugly" and not at all "representative of the character" of the late Speaker—the sort of criticisms that Harbeson himself had leveled at the proposed FDR design in February. To be sure, Thompson admitted, the new office building was not "restless" (as Harbeson said the FDR Memorial would be), but this was so, according to Thompson, because it had so much "steel per square foot" that he originally thought a "bomb shelter" was being constructed. If Congress had anything to do with approving the Rayburn Building (which a congressional commission did), then, Thompson concluded, it was "prima facie" evidence that laymen, such as the subcommittee, were ill-equipped to pass on architectural design.



WALTER BENNETT—TIME

Congressman Thompson

Does the Washington Monument have "repose," Thompson asked Fine Arts Commissioner David E. Finley, who had stated that the FDR Memorial was "lacking in repose." Yes, said Finley. Then how could repose exist at 555 feet, Thompson wondered, and not at 167 feet?

While Thompson produced the unexpected high points of the hearings, Architects William F. Pedersen, Philip Johnson, Philip Will, and Paul Rudolph testified eloquently in favor of the design. Although several others testified against it, supporters of the memorial were more hopeful.

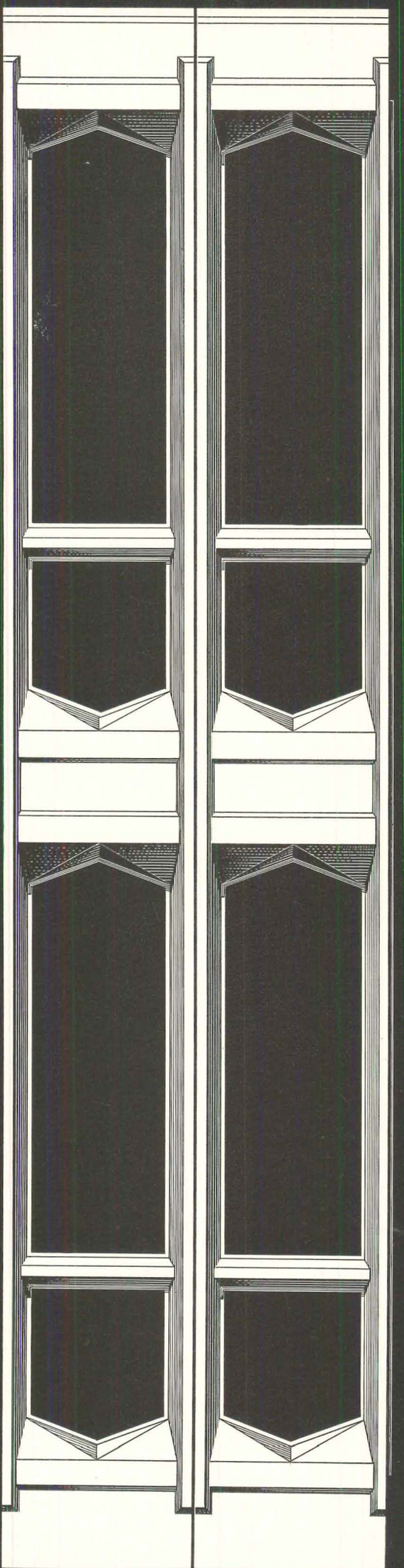
ABO: UNDERGROUND SCHOOL FOR SURVIVAL

In a torrid section of New Mexico, Architect Frank Standhardt has designed what may be the world's first subterranean school —Abo Elementary, which was officially dedicated last month. Located at Artesia, near Roswell, the underground school will contain 540 students, and can shelter 2,000 people for two weeks in case of nuclear war, and protect them against radioactive fallout.

So pleased with the Abo School were the people of Artesia (pop. 12,000) that they have just voted a bond issue to build a Standhardt-designed junior high that also will have its educational and service rooms below ground. Together with Abo, it will provide shelter space for all of Artesia's students.

continued on page 11

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TOWARDS BETTER FREEWAYS

Under the Federal Highway Act of 1956, 13 per cent of the total mileage of the interstate system of freeways will account for 45 per cent of the cost of construction. This small percentage of the total mileage represents the building of urban freeways (as distinct from rural freeways in open country) and, translated into distance and dollars, means 5,200 miles of highway costing over $18 billion.

This is the largest form of federal assistance to urban areas. To date, 1,200 miles of urban freeways able to bear the estimated volume of 1975 traffic have actually been completed. Against the background of another 4,000 miles by 1975, a Conference on Freeways in the Urban Setting was held last month at Hershey, Pa.

Sponsored by the HHFA, the U.S. Bureau of Public Roads, and the Automotive Safety Foundation with the cooperation of the AIA, AIP, ASCE, ASLA, the American Municipal Association, and the Institute of Traffic Engineers, the conference brought together everyone concerned with urban highways.

Among the far-reaching recommendations were the following:

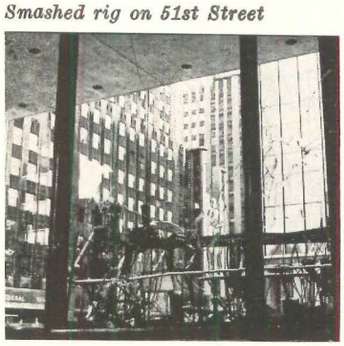
- There must be far greater teamwork in freeway planning between state and municipality and engineers and designers.
- The design professions must be called in at the outset when choices of location, roadway alignments, right-of-way cross sections, etc., are made.
- Freeways should be integrated with other elements of the transportation system: terminal and parking facilities, arterial street systems, etc.
- Freeway design should be harmonious with the existing or proposed land uses in the corridor.
- Freeway location and design should take into consideration its visual aspects from the points of view of both the user and the people in the areas through which it passes.

Perhaps even more important was the fact that highway planners and builders have come to realize that urban freeways involve much more than cooperation among all levels of government. Also notable: the many professions represented at Hershey started the three-day conference by expressing different philosophies and design objectives. They ended, however, recommending that "a common cause of compromise" must be recognized in urban and freeway design.

DROP FROM THE 19TH FLOOR

Suspended by wire cables from the roof-top outriggers of Manhattan's Equitable Life Assurance Society Building, the mechanical window-washing platform began operations as usual at 5 A.M. on May 30. By 5:35 A.M., it had moved downward to the nineteenth floor, guided by the aluminum mullions on the face of the building. Then, suddenly, the platform plummeted to the ground, killing the crew of four window washers.

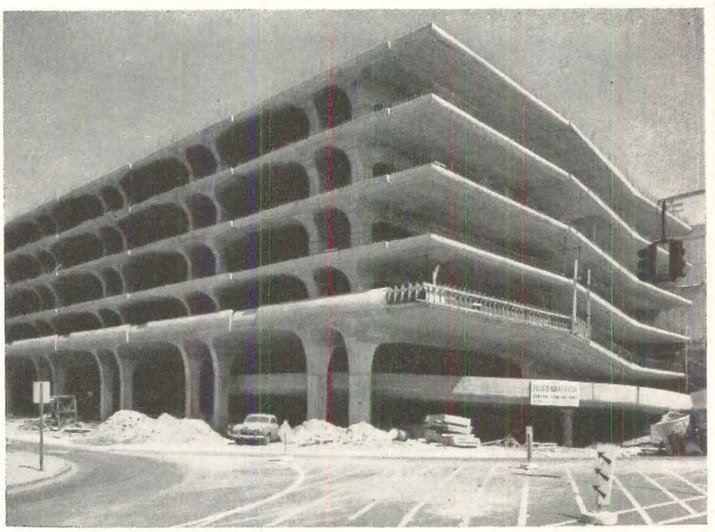
Smashed rig on 51st Street



UPI

Both major safety devices had failed. One is a deadman's button which moves the scaffold only when depressed; the other is a slack-cable device which stops the winch if excessive speed causes slack. All the teeth in the speed-reduction gear were reported to have been sheared off. While this would account for the failure of the motor to halt the winch, it did not explain why the automatic brakes had not held.

New York's 13 similar rigs were grounded after the accident. Three investigations were started. Probable outcome: a revised code for operating and inspecting the scaffolds, and mandatory rail-gripping brakes for all such rigs.



BRUCE CUNNINGHAM-WERDNIGG

RUDOLPH'S SCULPTURED GARAGE NEARING COMPLETION

The strikingly handsome, poured-concrete structure (above) is Architect Paul Rudolph's parking garage now nearing completion in New Haven. Although it is only five stories high the garage has ten levels aboveground, two below, and will house 1,500 cars in all. On the Temple Street side there will be a series of small stores; next door, Malley's department store. While the garage will be open for partial operation in October, the stores will not be completed until a later date. Located some two blocks south of the town center, the area is planned eventually to become the main shopping district of New Haven, and is especially convenient to an access road off the Connecticut Turnpike. Shoppers, thus, will be able to drive off the turnpike, park, and get into the area without having to enter city street traffic. The builders of the structure are the Fusco-Amatruda Corp.

WHEN THE TIME TO MOVE ARRIVES

As urban renewal and urban rehabilitation projects multiply, so by these projects does the displacement of families (see FORUM, April '62). URA's William L. Slayton is rightly concerned, has reworked procedures "to make as certain as we can that housing will be planned, will be made available, and will be accessible to displaced site occupants when the time to move arrives."

Slayton noted that during urban renewal's 13-year history, 113,000 families have been supplanted. Of this number, 7 per cent went into substandard housing, another 7 per cent moved to other cities, and a third 7 per cent just disappeared; 79 per cent found adequate, safe housing. By 1973, Slayton estimated, the number of displaced families would reach one million.

To cope with the problem, URA has tightened relocation requirements for all local relocation agencies. Henceforth, cities will not be able to get their urban renewal projects approved on unsubstantiated assurances that they will take care of the people forced to move. Specifically, Slayton's reforms include complete surveys of site residents, while the project is in the planning stage, and making available relocation information to residents.

Location will not have to be entirely solved by public housing projects (which only attract one-third of the displaced families), Slayton stated. FHA's new 221 (d)3 program for rental housing at a subsidized interest (FORUM, March '62) has received "a fairly good response." Nor does he feel that urban renewal projects will now concentrate on business districts, for more people live in the fringes of such areas than is believed and they tend to resist relocation.

Probable outcome: a less ambitious, more deliberate renewal program. Remarked Slayton: some cities may have already "bitten off more than they can chew."

continued on page 13



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People In The News



COURTESY THE PORT OF NEW YORK AUTHORITY

Nervi and Port Engineer John Kyle

"E FATTO MOLTO BENE"

In late May, Italian Architect-Engineer PIER LUIGI NERVI wound up a trip to this country with a lightning-quick inspection of his almost completed "butterfly" roof for the Port of New York Authority Bus Terminal. With Authority officials in anxious attendance, Nervi cast his practiced eye over the gigantic concrete Erector Set. His opinion: *"E fatto molto bene."*

Earlier in the spring, Nervi had stopped off in Hanover, N. H., to check on the progress of his other building in the U. S. (a field house for Dartmouth College) and in Cambridge, Mass., to deliver three Charles Eliot Norton lectures at Harvard University. He shared the annual Professorship with R. BUCKMINSTER FULLER and FELIX CANDELA. The three are the first architects or engineers to receive the appointment. Harvard further honored Nervi by giving him an honorary Doctor of Arts degree because "his genius has added new scope and beauty to the building art."

WEBB AND JAKE

In recognition of his running the firm's day-to-day operations for over two years, the Del E. Webb Corp. has appointed L. C. JACOBSON as president. His boss, DEL WEBB, will remain in authority as chief executive officer—and fully as active as in the past. Diversification of the company forced Webb from control of daily activity to concentrate on company policy. The change does no more than recognize Jacobson's actual status; he will not assume any new duties or authority. As one spokesman put it: "Webb will continue running around negotiating and Jake will stay put, talking to him on the phone every day—just as they always have."

A FOURTH FOR BRIDGE

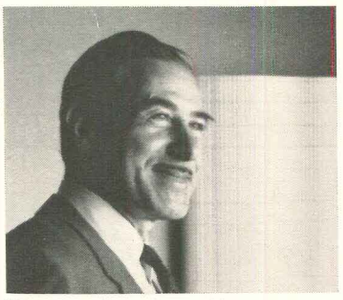
Last month, an already rocky stock market was further staggered by the departure of EDWARD M. GILBERT, who since 1958 has headed E. L. Bruce Co., one of the nation's leading hardwood-floor manufacturers. Gilbert left a directors meeting to fly direct to Rio de Janeiro—after admitting that he took nearly $2 million in company funds. The stock, which had once boomed to $192 a share due to Gilbert's buying when he seized the company in a proxy fight (FORUM, Nov. '58), slumped to $15 before trading was suspended last month. Gilbert joins three other wayward financiers (Ben Jack Cage, Earl Bell and Lowell Birrell) in extradition-free Rio.

RICE'S EXPERIMENT

Under Architect WILLIAM W. CAUDILL, Rice University's Department of Architecture has come up with two bright ideas recently. One was the "Preceptorship Program" in which students work in leading architects' offices (FORUM, April '62). The other: 40 ranking architectural students from nine colleges throughout the nation met last month with ten renowned working architects to see what ideas they could concoct to help solve the junior-college problem. The architects (DONALD BARTHELME, CHARLES W. BRUBAKER, JAMES H. FINCH, PAUL HAYDEN KIRK, FRANKLIN D. LAWYER, EDMOND LAY, GYO OBATA, JOSEPH J. SCHIFFER, LINN SMITH, and GIN WONG) were given an office, some of the students as a working force, and an imaginary tract of 30 to 200 acres in specific states to develop drawings, models, and specifications. According to the Educational Facilities Laboratory of New York, which supplied a $30,000 grant for the experiment: "the general level of the work was very high; several of the models were good enough to serve for junior-college design."

S.F. DOWNTOWN CONSULTANT

Architect MARIO CIAMPI was selected last month by the San Francisco Planning Commission to be its consultant in the preparation of a downtown plan. This plan will be the culmination of over ten years' study and research in the traffic, transit, and developmental aspects of downtown San Francisco, an area which has such architectural landmarks as the



FRED LYON—LIFE

Planning Consultant Ciampi

Crown Zellerbach and Hancock buildings by SOM and the International Building by Anshen & Allen. Ciampi, a resident San Franciscan, has designed several well-known schools in California (FORUM, Nov. '61), a series of civic buildings in the Bay area, and collaborated in a master plan for the development of the University of Alaska at Fairbanks. One of his major tasks will be the improvement of the overall appearance of the established, stable downtown area.

KUDOS

Academia, last month, dispensed its degrees, and honorary degrees, with accustomed aplomb. Favored with an honorary Doctor of Fine Arts degree by Pratt Institute was Architect PHILIP JOHNSON. Best-known as co-designer of the Seagram Building with MIES VAN DER ROHE, Johnson was cited for his "profound contributions to contemporary architecture, his outstanding buildings, his literature and theory, and his interest in education."

A few days before, Special Consultant on the Arts to the White House AUGUST HECKSCHER received an honorary degree of Doctor of Laws from Fairleigh Dickinson University. His plea: that "all the arts—the lively and creative arts—receive among us the credit that is their due."

City Planner and Educator LUDWIG K. HILBERSEIMER accepted his honorary Doctor of Laws degree at Western Reserve University in Cleveland. Author of such books as *The New City* and *The New Regional Pattern,* he was awarded the degree for his contributions to city and regional planning.

WHO TO HEW? WHO TO HHFA?

As everybody has known for some time, HEW Secretary ABRAHAM A. RIBICOFF will shortly tender his resignation in order to run for the Senate in Connecticut this fall. According to some, his replacement will be ROBERT A. WEAVER, present HHFA Administrator, who, if appointed, would be the first Negro in U.S. history to hold a Cabinet post. Leading contenders for the vacancy at HHFA: New Haven's Mayor RICHARD C.



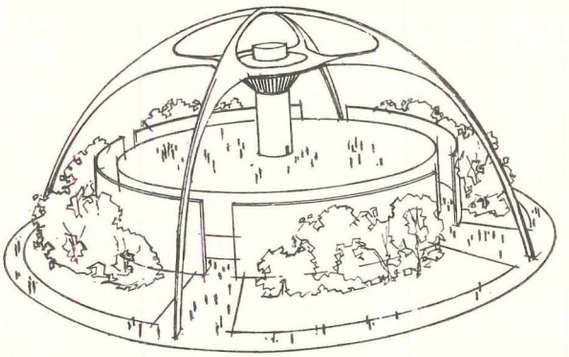
COURTESY HOUSE & HOME

HHFA's Weaver

LEE, (prominently photographed in attendance when the President made his address at Yale last month); and HHFA Deputy Administrator JACK CONWAY. Dark horses: Chairman of the Federal Home Loan Bank Board JOSEPH P. MCMURRAY and Mayor BEN WEST of Nashville. Other talk places Lee as a "very high official" in HEW.

NOTE: *The AIA is conducting a competition for the Department of Defense. Subject: an elementary school with fallout shelter. Information from the Octagon. Registration to July 15.* END

"Theme" Building—highly distinctive focal point of the new air terminal at Los Angeles International Airport.

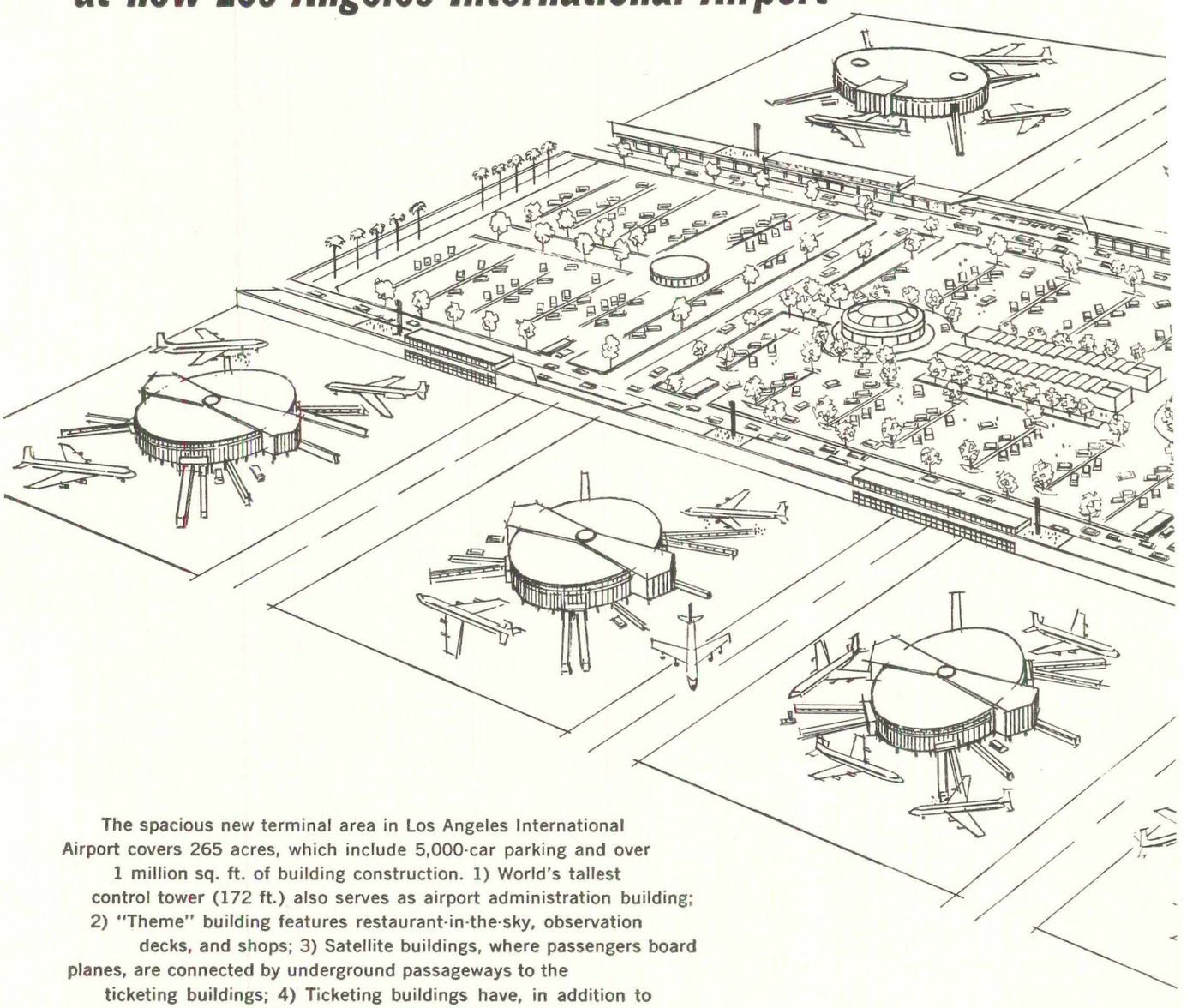


Executone sound chosen by all 17 Airlines at new Los Angeles International Airport

Every square foot of public area in terminal buildings at huge Los Angeles International Airport is within reach of clear crisp sound by Executone.

Although known as the world's first totally designed airport, the choice of sound systems was left to the individual airline tenants. And all 17 tenants chose Executone for installations designed to their own requirements!

Providing sound facilities for such a vast and



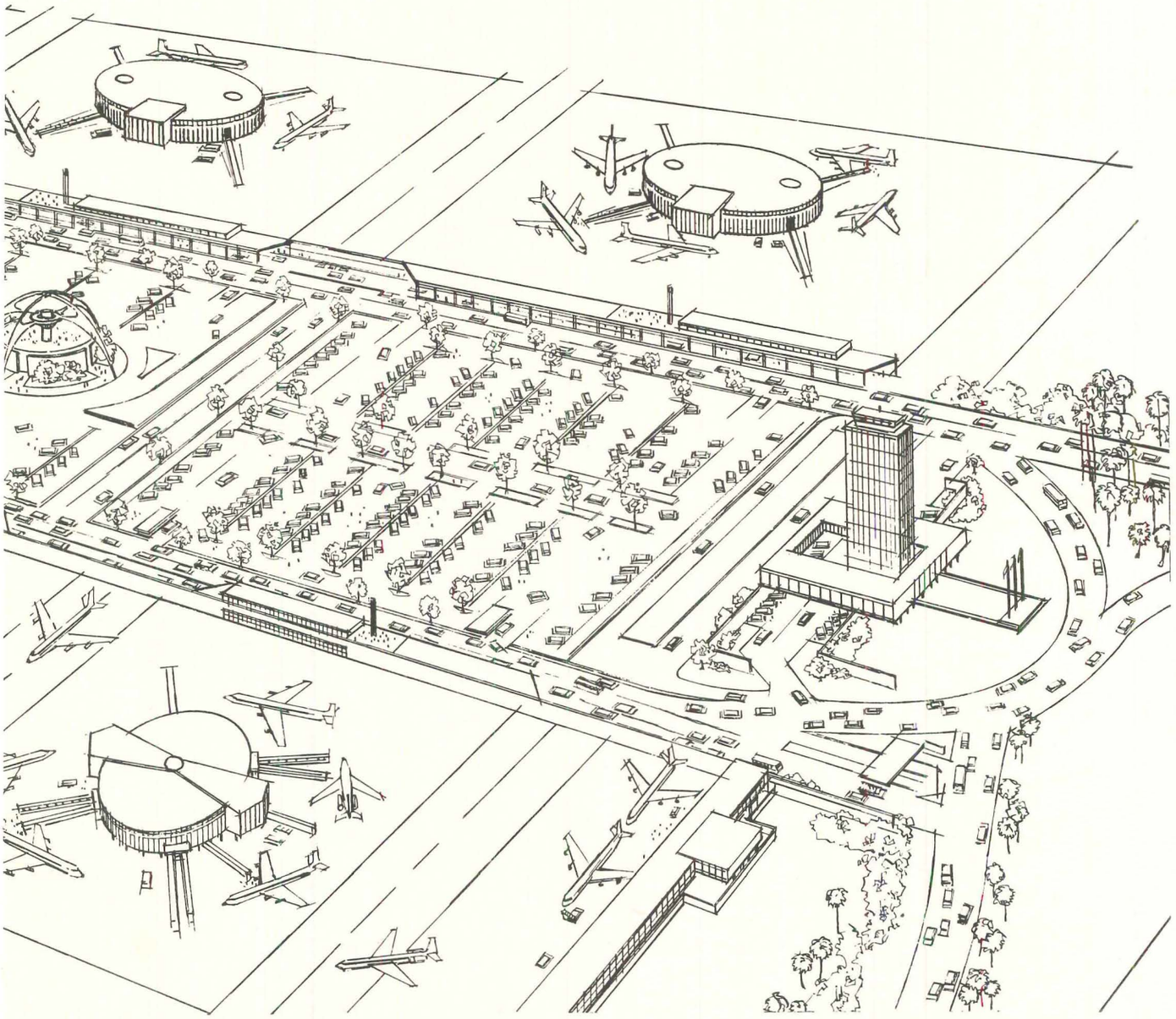
The spacious new terminal area in Los Angeles International Airport covers 265 acres, which include 5,000-car parking and over 1 million sq. ft. of building construction. 1) World's tallest control tower (172 ft.) also serves as airport administration building; 2) "Theme" building features restaurant-in-the-sky, observation decks, and shops; 3) Satellite buildings, where passengers board planes, are connected by underground passageways to the ticketing buildings; 4) Ticketing buildings have, in addition to streamlined ticket and baggage handling facilities, fine restaurants, shops, and a host of other comforts and services.

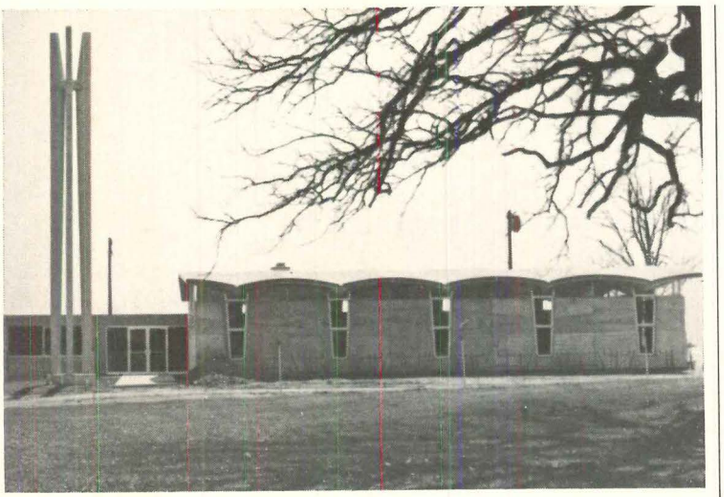
intricate complex of buildings, ramps and passageways was a mammoth undertaking. Outstanding features include: automatic pre-recorded flight announcements, complete with central and local control selectors; local paging systems that operate independently of the airport public address system; background music systems; outdoor speaker trumpets for selective paging; intercom systems; automatic foreign language translations that follow English announcements of overseas flights.

Sound systems of a magnitude similar to Los Angeles International Airport are not unique for Executone. Dulles International, Moisant, O'Hare and Honolulu International are other installations where Executone's high standards in design and layout, in quality and performance of the equipment, in exceptional local service organizations are delivering great value to owners.

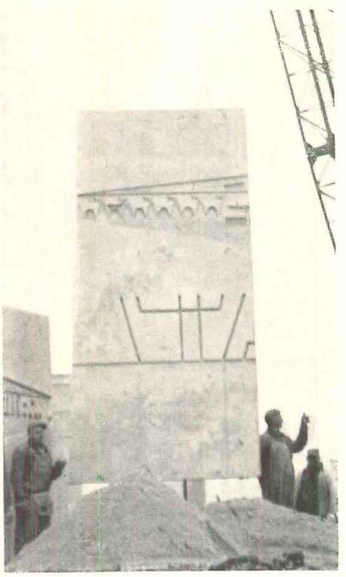
When your projects call for sound or intercom, why not avail yourself of Executone's wide experience? Our architectural files on institutions, industrials, shopping centers, churches and other places of assembly are available without obligation. Write to Executone, Dept. S-1, Austell Place, Long Island City 1, New York. In Canada, 331 Bartlett Ave., Toronto.

Executone

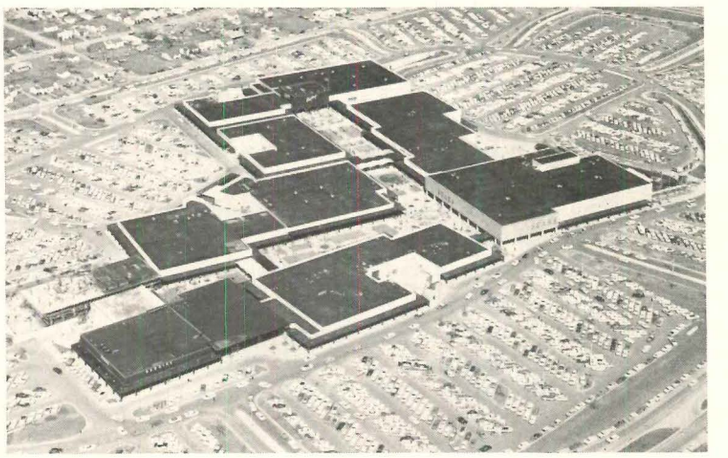


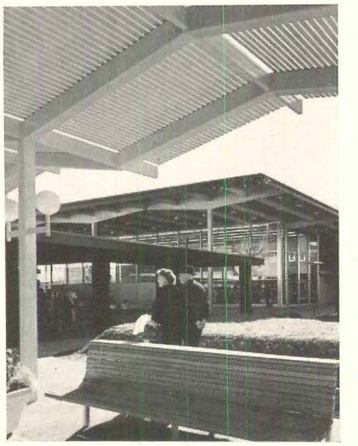


BIG CEDAR STUDIOS



PRECAST CHURCH. A roof of concrete shells supported by ten interior columns leaves the walls free of structural duty in the new First Congregational Church of Mukwonago, Wis. The sculptured concrete panels of the walls, designed by Artist Karl Giehl, were precast and then assembled on the site by crane (left). They depict the parables of Jesus, emphasizing the fact that the Congregational Church has historically been a teaching church. In front, three tapering precast columns form a bell tower symbolizing the Trinity. Architect: William P. Wenzler. Structural consultant: Alfred Parme. General contractor: Oliver Construction Co. Cost came to $137,000, or about $10.50 per square foot.





LAWRENCE JOSEPH

SHOPPING CENTER. Ft. Worth's new Texas-sized Seminary South Shopping Center is the Southwest's largest: 85 acres and 900,000 square feet of rentable space. Architects Loebl, Schlossman & Bennett (design); Preston Geren (coordination) and George Dahl (field) did the center for Homart Development Co., a subsidiary of Sears, Roebuck & Co. Seminary South is the first regional shopping center to be developed, owned, and operated by Sears. Landscaping: Lawrence Halprin. Contractor: Thomas S. Byrne, Inc. Cost: $9 million.

LIVESTOCK PAVILION. The fact that livestock trading takes place in an auction ring determined the circular plan of the Flato Pavilion in Kingsville, Texas. To roof the space, Architect Alan Y. Taniguchi designed a huge parasol 126 feet across, made up of eight curved concrete shells, vented by an octagonal opening covered with a plywood cupo'a. Traders sit on benches arranged in amphitheater fashion above the livestock floor (seen at right in photo below). Structural engineer: C. W. Johnson. Contractor: Clark Brothers Construction Co. Cost: $65,000, under $3 per square foot.

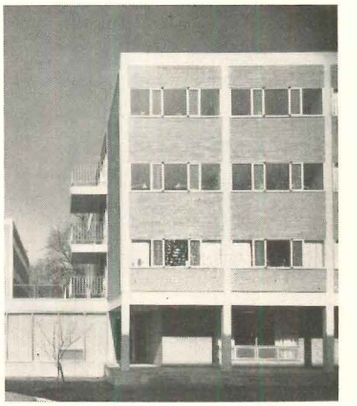


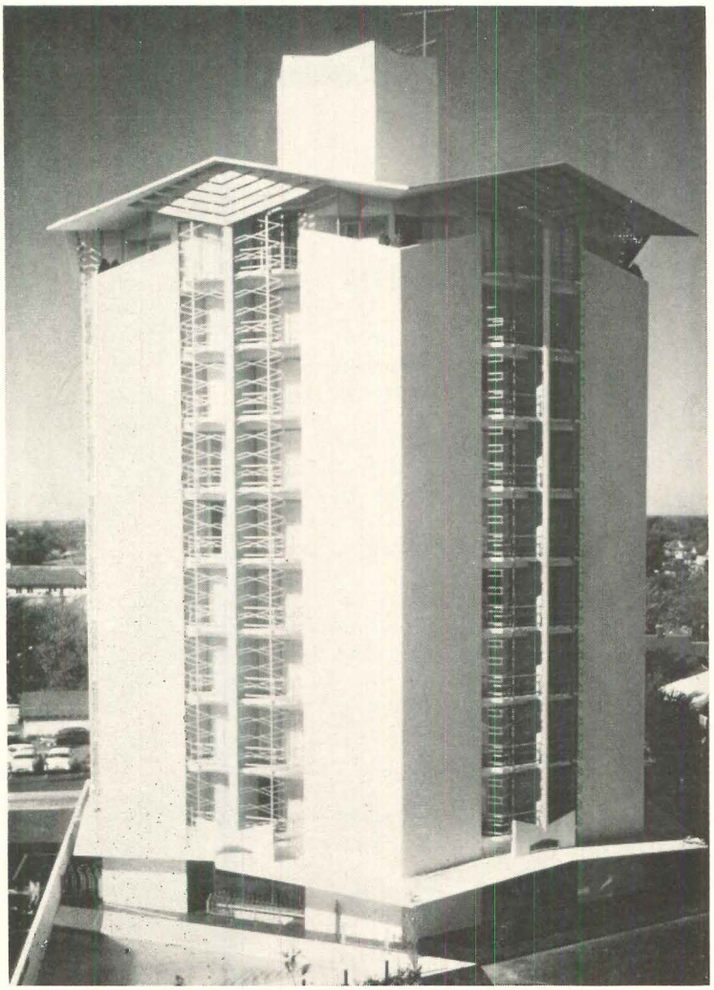
PURNELL COMMERCIAL PHOTOS



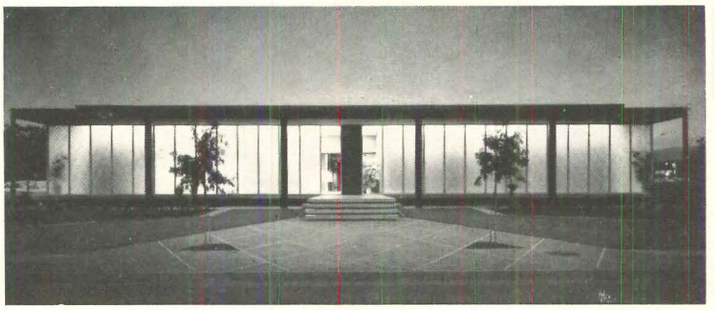
A. R. THIEL

FOUR-IN-ONE DORMS. Four new four-story residences for 420 coeds at Cleveland's Western Reserve University are linked to a common dining hall by glass-walled galleries. Architects Outcalt, Guenther, Rode, Toguchi & Bonebrake designed the $2 million group around two enclosed garden courts. Engineers: Barber, Magee & Hoffman (structural); Howard D. Bennett & Associates (mechanical); and Paul C. Mehnert (electrical). Contractor: Roediger Construction Co.



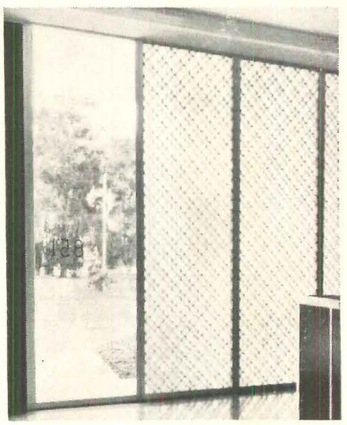


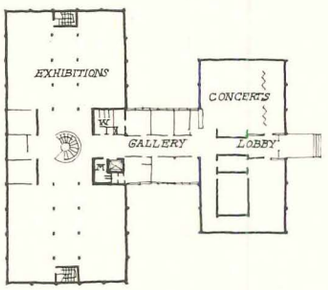
HEXAGONAL HOTEL. In designing this hotel tower for Oklahoma City investors, Architects Bailey, Bozalis, Dickinson, Roloff used a diamond-shaped module resulting in an hexagonal floor plan. Six big concrete corner shafts, which are diamond-shaped in plan, house all bath and dressing rooms and provide sole perimeter support. Sleeping and living rooms between the corner piers open onto cantilevered terraces six feet deep, some overlooking a swimming pool. Contractor: Harmon Construction Co. Cost: about $1 million.



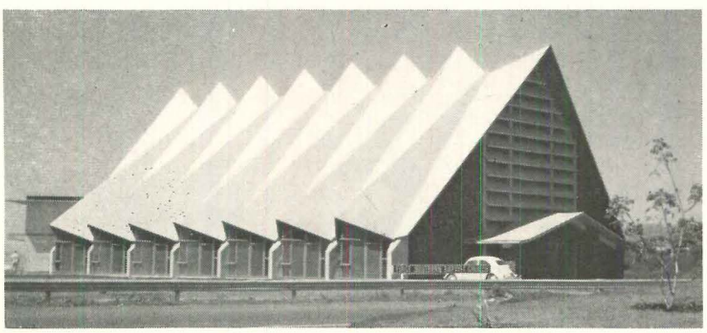
MORLEY BAER

TRANSLUCENT BANK. For Investment Bankers Draper, Gaither & Anderson in Palo Alto, Calif., Architect Paul James Huston has arranged offices around an open court, and sheathed them in translucent panels of decorative filigree sandwiched between sheets of plastic. The panels, which cost $4.70 per square foot, act as a thermal barrier and reduce lighting needs. Landscape architect: Thomas Church. Engineers: Pregnoff & Matheu. Contractor: Wagner & Martinez. Construction cost was about $168,000.

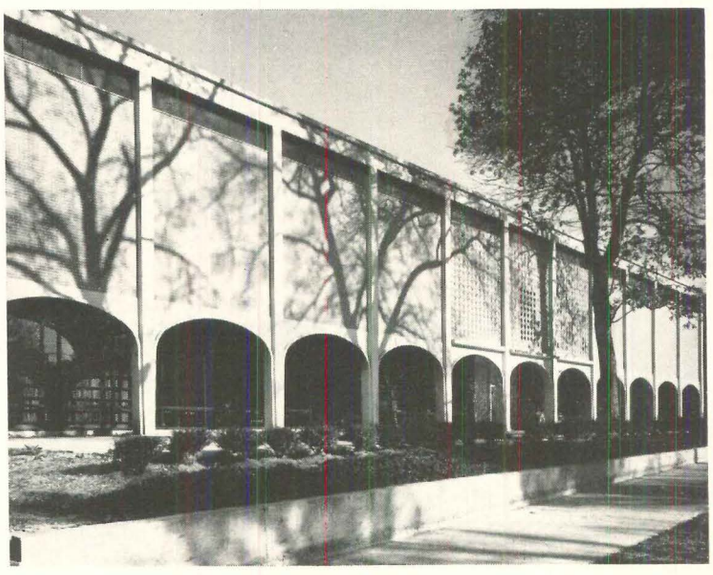




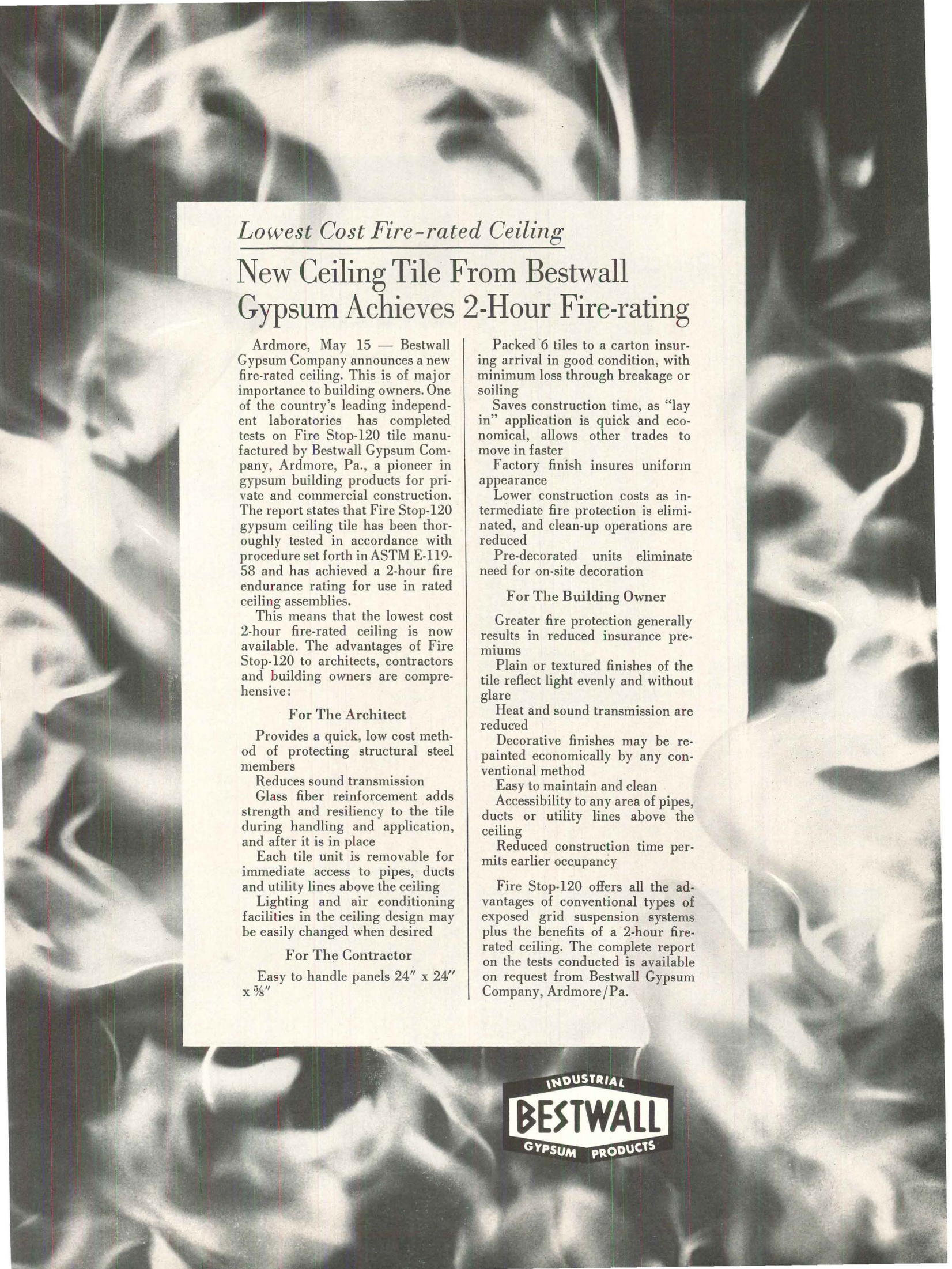
LIBRARY-MUSEUM. This new facility in Montgomery, Ala., combines a public library and museum in one building, designed by Architects Sherlock, Smith & Adams. From one street, entrance is to the library on the first floor; from the other, to the museum on the second (see plan of upper level at left). The structure is a reinforced concrete frame with arches, infilled with open terra cotta tiles and solid brick. Cost: $700,000. General contractor: Baer Brothers, Inc. END



HAWAIIAN CHURCH. For The First Southern Baptist Church of Pearl Harbor, Architect Ralph M. Buffington has designed this 1,000-seat sanctuary and 14,000-square-foot Sunday school, with eventual expansion planned as part of a 20-year building program. The precast concrete, folded plate roof is supported on heavy concrete buttresses. Engineers: Donald Lo (structural); Jochen & Henderson (mechanical). Contractor: Charles Winstedt.



SCOTT PHOTOGRAPHIC SERVICES



Lowest Cost Fire-rated Ceiling

New Ceiling Tile From Bestwall Gypsum Achieves 2-Hour Fire-rating

Ardmore, May 15 — Bestwall Gypsum Company announces a new fire-rated ceiling. This is of major importance to building owners. One of the country's leading independent laboratories has completed tests on Fire Stop-120 tile manufactured by Bestwall Gypsum Company, Ardmore, Pa., a pioneer in gypsum building products for private and commercial construction. The report states that Fire Stop-120 gypsum ceiling tile has been thoroughly tested in accordance with procedure set forth in ASTM E-119-58 and has achieved a 2-hour fire endurance rating for use in rated ceiling assemblies.

This means that the lowest cost 2-hour fire-rated ceiling is now available. The advantages of Fire Stop-120 to architects, contractors and building owners are comprehensive:

For The Architect

Provides a quick, low cost method of protecting structural steel members

Reduces sound transmission

Glass fiber reinforcement adds strength and resiliency to the tile during handling and application, and after it is in place

Each tile unit is removable for immediate access to pipes, ducts and utility lines above the ceiling

Lighting and air conditioning facilities in the ceiling design may be easily changed when desired

For The Contractor

Easy to handle panels 24″ x 24″ x ⅝″

Packed 6 tiles to a carton insuring arrival in good condition, with minimum loss through breakage or soiling

Saves construction time, as "lay in" application is quick and economical, allows other trades to move in faster

Factory finish insures uniform appearance

Lower construction costs as intermediate fire protection is eliminated, and clean-up operations are reduced

Pre-decorated units eliminate need for on-site decoration

For The Building Owner

Greater fire protection generally results in reduced insurance premiums

Plain or textured finishes of the tile reflect light evenly and without glare

Heat and sound transmission are reduced

Decorative finishes may be repainted economically by any conventional method

Easy to maintain and clean

Accessibility to any area of pipes, ducts or utility lines above the ceiling

Reduced construction time permits earlier occupancy

Fire Stop-120 offers all the advantages of conventional types of exposed grid suspension systems plus the benefits of a 2-hour fire-rated ceiling. The complete report on the tests conducted is available on request from Bestwall Gypsum Company, Ardmore/Pa.

INDUSTRIAL
BESTWALL
GYPSUM PRODUCTS

CHICAGO

Forum: Congratulations on the outstanding May issue of FORUM . . . one in which all of us here having to do with development are justly proud.

IRA J. BACH
Commissioner of City Planning
Chicago

Forum: You were very wise in selecting Chicago, the fountainhead of modern American architecture. I hope other cities will be covered in future issues.

FRAN LANSKY
Architect
Memphis

Forum: You are to be congratulated on the outstanding May issue. However, no mention of this planning organization was noted in your otherwise fine coverage. Since our objectives parallel, include, and go beyond those which you so persuasively suggest in your concluding editorial, we are surprised.

PAUL FRANK JERNEGAN
Chairman, Lake Michigan Region Planning Committee
Chicago

Forum: Congratulations on the splendid result which your skill and exhaustive research produced.

LEO J. SHERIDAN
Chairman, L. J. Sheridan & Co.
Chicago

Forum: . . . superb!

DAVID L. RICHARDSON
Architect
Indianapolis

Forum: In your article on Harry Weese you stated that MIT was the oldest architectural school in the U.S. According to *Illini Guidelines,* this honor belongs to the University of Illinois.

LAWRENCE EMERT
University of Illinois
Champaign

■ *"American Universities and Colleges" credits MIT with the first school of architecture in the U.S., founded in* 1865, *and Illinois with the second, in* 1868.—ED.

Forum: Heartiest congratulations . . . the Chicago issue is already turning into a collector's item.

LEO H. ANDERSON
Continental Casualty Co.
Chicago

Forum: Among the structures illustrated in your May issue are Inland Steel, Harris Trust, and Lake Meadows, all built by Turner. No mention is made of this fact, which would be understandable, except that in the caption for the Brunswick Building is a credit line to George A. Fuller, Contractor.

We do think that we are entitled to equal recognition.

A. R. LE FAUCHEUR
Turner Construction Co.
New York City

■ FORUM *regrets that space and the character of the articles precluded full credits (and that one exception did creep in). In more detailed stories, of course, all major members of the building team do figure, as was the case when* FORUM *first published Inland Steel, Harris Trust, and Lake Meadows.*—ED.

Forum: One of the most refreshing and exciting endeavors ever undertaken by an architectural journal.

M. PERRY CHAPMAN
Rochester, N.Y. *City Planning Commission*

"ARCHITECTURE IN DECLINE"

Forum: Your remarks about Webb & Knapp's financial position in your summary of the recent architectural panels at the Museum of Modern Art (FORUM, June '62) could emanate only out of profound ignorance. You misinterpret the Webb & Knapp construction record, to wit:

1. All Webb & Knapp construction to date has been done entirely with private capital.
2. Webb & Knapp projects are among the few erected with private capital for investment or speculative purposes that have won national AIA citations.
3. Webb & Knapp has never received a subsidy from the U.S. government in any sense that you may have intended to insinuate. There is not a single project that Webb & Knapp has built on which private capital was not used exclusively.

You apparently have made the common mistake of assuming that federal subsidies *paid to cities* to reduce their costs of eradicating slums somehow constitute subsidies to redevelopers. This is not so. Redevelopers must pay the *full fair re-use value* for every redevelopment area and they receive no subsidies in any sense of the word. (It is not the redeveloper's responsibility to eradicate slums, but the community's; and it is the city or the community that receives the federal subsidy for that purpose, not the redeveloper.)

Although FORUM deserves the greatest commendation for its bold, long-standing support of fine architecture, your ill-founded criticism in this instance strikes me as a deviation from your customary standards.

WILLIAM ZECKENDORF
Chairman of the Board Webb & Knapp, Inc.
New York City

■ *The article did not intend to suggest that Webb & Knapp was subsidized by the U.S. government but rather that the urban renewal program did involve an indirect subsidy which enabled good developers like Mr. Zeckendorf to produce first-rate projects that might have been infeasible had the land been acquired in the normal way. The purpose of the entire article was to suggest that tax and other laws should be reformed to offer incentives to good developers like Mr. Zeckendorf rather than offer incentives to unscrupulous builders.* FORUM *has admired and published many of Webb & Knapp's outstanding buildings in the past and plans to do so in the future; and* FORUM *also hopes to use its editorial influence to make life easier for those, like Mr. Zeckendorf, who believe in building better cities and harder for those who, unlike Mr. Zeckendorf, see in the city merely an opportunity for quick hit-and-run profits.*—ED

Forum: You are to be congratulated for your courage and foresight in publishing Peter Blake's provocative remarks.

ULRICH FRANZEN
Architect
New York City

SUSPECT INSTITUTE

Forum: Regarding the "International Institute of Arts and Letters" (April '62 "News"), I received an announcement from this organization indicating that I had been elected by the Board of Directors. A check indicated that the American Federation of Artists had exposed IIAL as a fraud.

ROBERT LAWTON JONES
Architect
Tulsa

Forum: I too received an invitation to join this impressive organization. The literature, credentials, and lists of new members are indeed impressive. However, the American Association of University Professors' "Bulletin" rather competently puts this organization in its place.

I also wrote a letter of inquiry to the IIAL. I have had no reply whatsoever.

Since it appears that architects are becoming an easy target for this operation, I thought you might be interested in the evidence so far.

ELIOT NOYES
Architect
New Canaan, Conn.

■ *While the evidence indicates that the IIAL is indeed suspect,* FORUM *is checking into the matter and will report at a later date. Meanwhile, Architect Victor Gruen, whose election was reported in* FORUM*'s News item, has informed the IIAL of his withdrawal.*—ED.

THE FDR MEMORIAL

Forum: I take exception to your condemnation of the Commission of Fine Arts for its rejection of the Roosevelt Memorial design ("Editorial", April '62). The jury may have been one of the finest, but that does not alter the fact that it selected a poorly conceived artistic fraud. Perhaps the commission would have rejected a great work of art as easily as it rejected the Memorial. In this case, however, it performed a public service regardless of its motives and qualifications.

CHARLES MONTOOTH
Architect
Scottsdale, Ariz.

Forum: The decision of the Fine Arts Commission was most unfortunate. What a pity that the recommendation of an eminent jury should be annulled so easily by a conservative commission!

WILLIAM LESCAZE
Architect
New York City

continued on page 20

continued from page 19

KEMIKO

PERMANENT CONCRETE STAINS

Color in Concrete / Ageless as Nature

Only KEMIKO can bring to concrete color with all of the naturalness, beauty and permanence of Nature's own stone colorations.

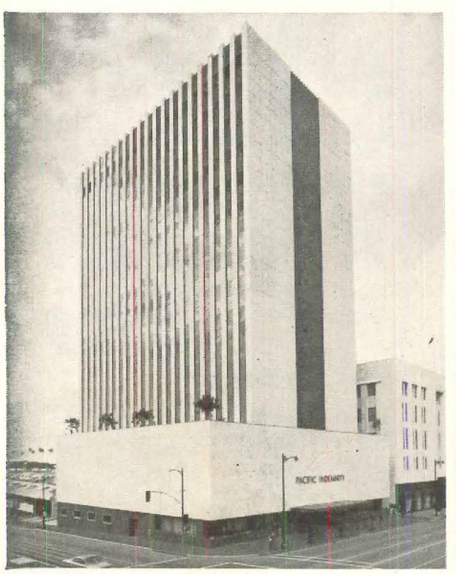
KEMIKO is unique. Not a dye or paint, it is an inorganic chemical stain that reacts upon the calcium to form permanent color. A product of 30 years research, KEMIKO Stains and companion products have been specified by leading architects throughout the world.

1. *A beautiful building deserves beauty underfoot.* To produce a non-skid, beautiful, and glare-proof sidewalk, black Kemiko Stain and Col-r-tone were called upon for this job at Pacific Indemnity building at Los Angeles, California. The dramatic black and white of the building itself was picked up in the black sidewalk and mall, scored for striking design.

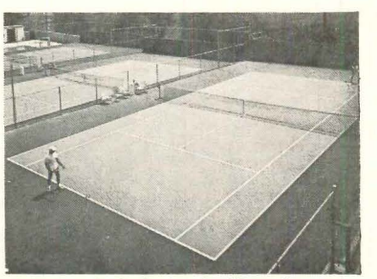
2. *Tennis courts for champions.* These courts are treated with Kemiko Stain and Kemiko Col-r-tone to produce an ideal, non-skid, dust-free playing surface. Tennis courts may be full treated with solid or two-tone effects of rich, uniform color which withstands not only the elements, but heavy use as well. To date, more than 25 million square feet of tennis court surfaces have been finished with Kemiko products.

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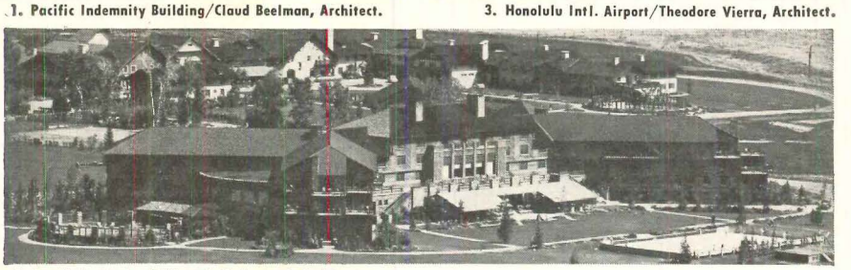
1. Pacific Indemnity Building/Claud Beelman, Architect.



2. Southern California championship tennis courts.



3. Honolulu Intl. Airport/Theodore Vierra, Architect.



4. Sun Valley Lodge/Gilbert S. Underwood, Architect.

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100 BIGGEST ARCHITECTS

Forum: We would appreciate four copies of the "100 Biggest Architects," (May, '62). This is an excellent article and most informative.

WILLIAM E. LEHMAN
Newark, N.J. *Architect*

Forum: There is a great deal of prestige connected with inclusion in your annual list, and we hope that our work can in the future get the recognition it deserves.

OSKAR STONOROV
Philadelphia *Architect*

■ *The firm of Stonorov & Haws should have been included in the* $20 *to* $25 *million group.*—ED.

Forum: You are evidently the victim of a report based on pure fantasy when you include Neutra & Alexander in the 100 Biggest Architects. During that entire year, Neutra & Alexander had no employees whatsoever.

I have not entered into a new contract with Mr. Neutra since 1958, although we are still completing work in my office contracted for before that time.

ROBERT E. ALEXANDER
Los Angeles *Architect*

■ *The entry "Neutra & Alexander" should have read "Richard J. Neutra and the firm of Neutra & Alexander." The $18 million of construction put in place originated mainly in the office of Richard J. Neutra.*

Also, as a result of misinformation furnished FORUM, *the office of Architect William Lescaze was reported as having three registered architects on its staff, rather than the actual number, five.*—ED.

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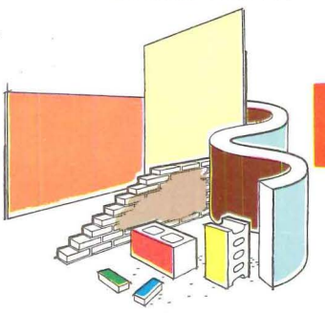
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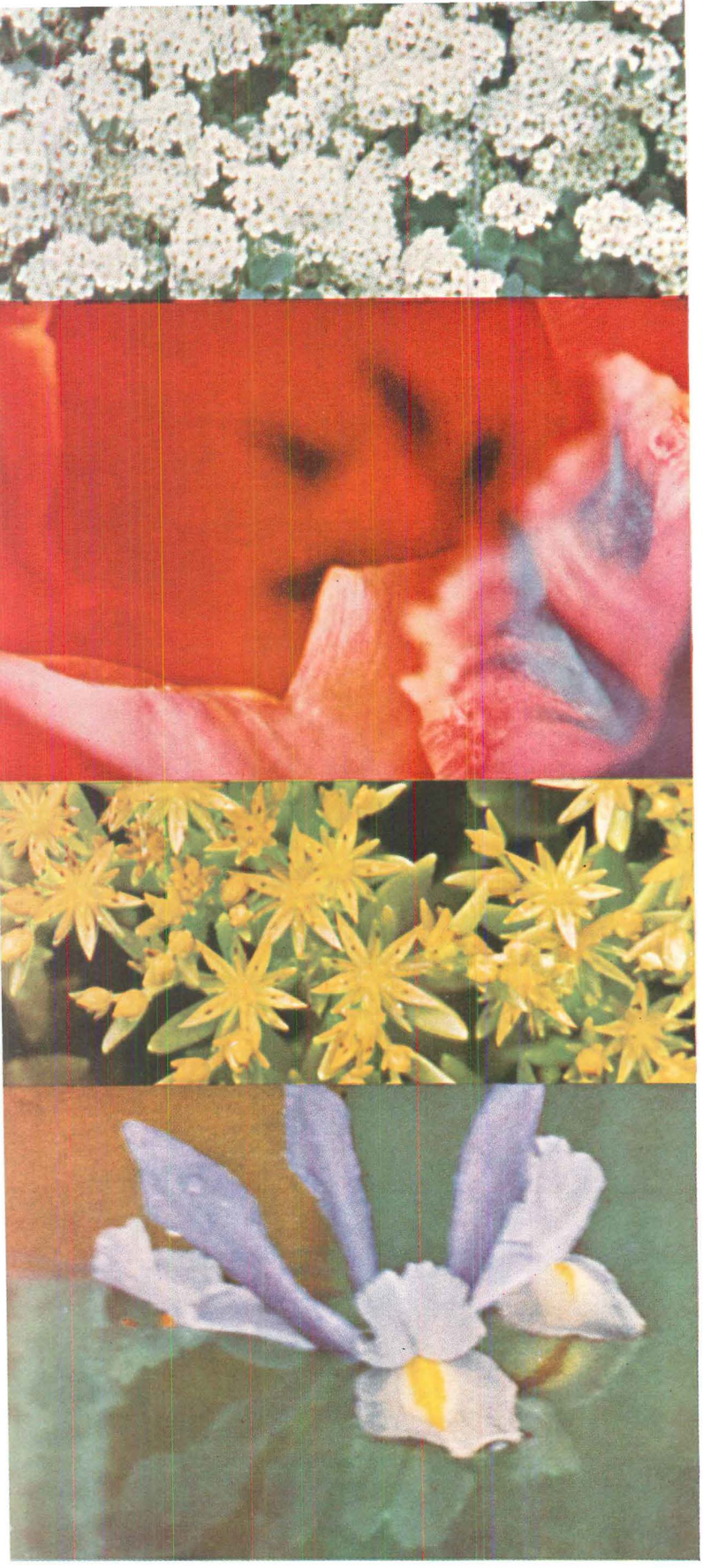
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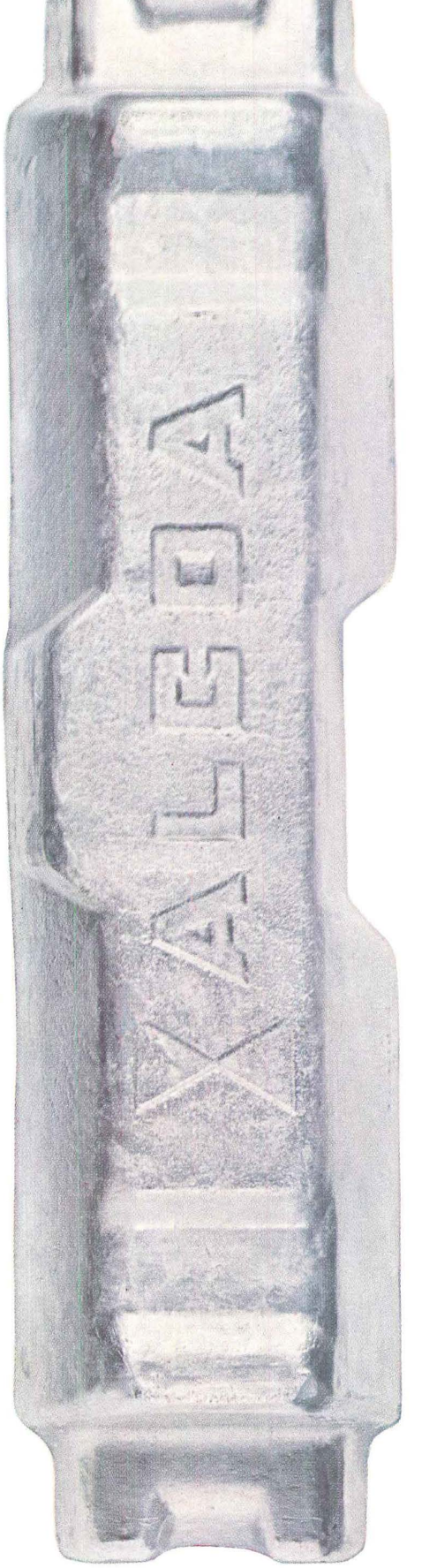
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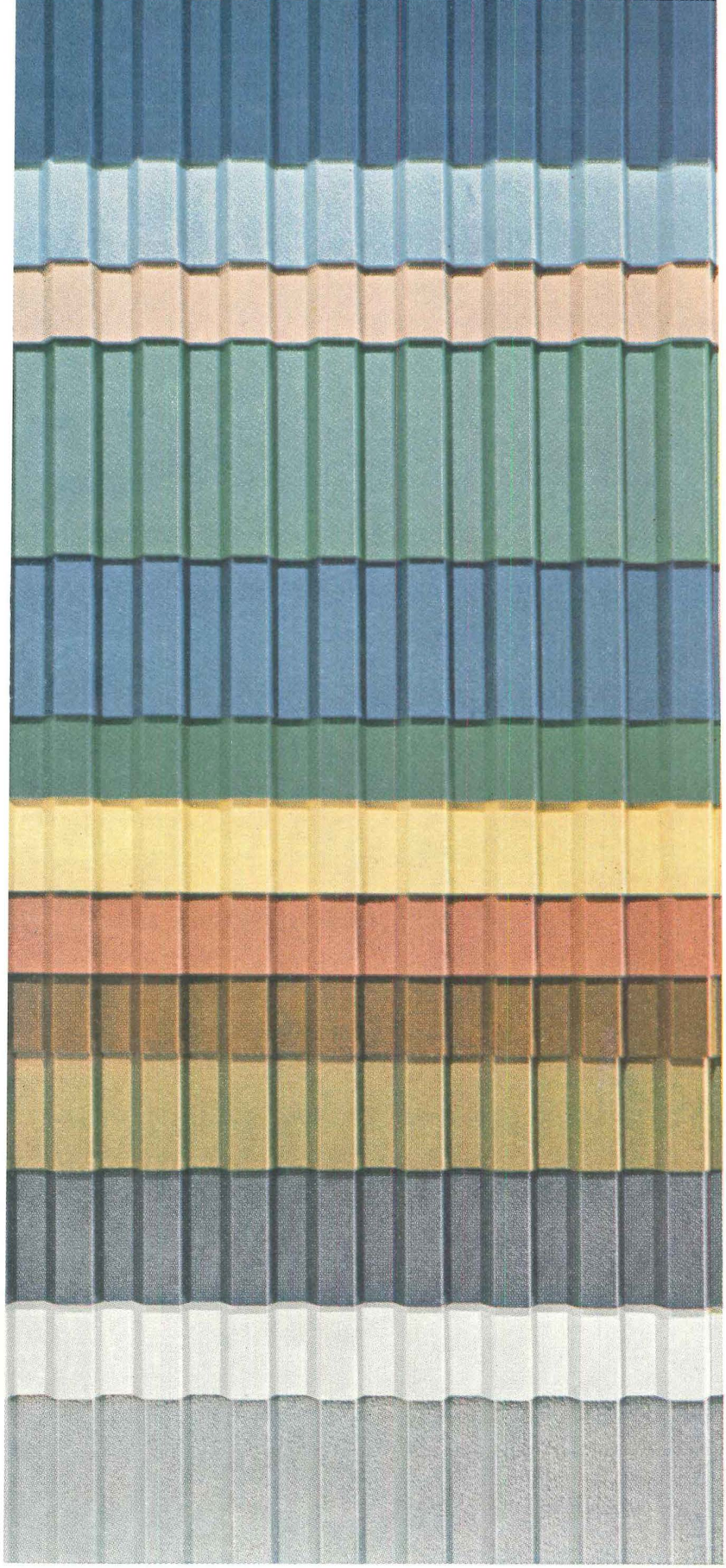
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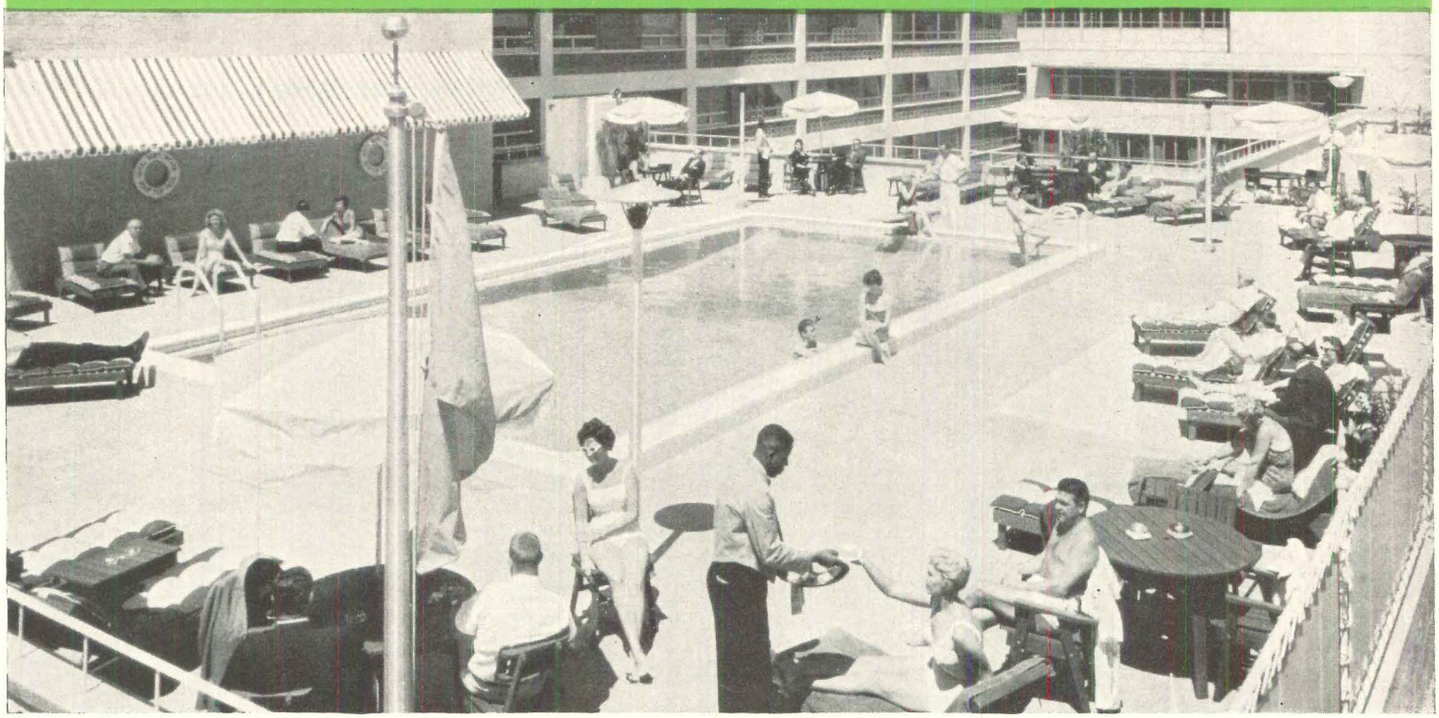
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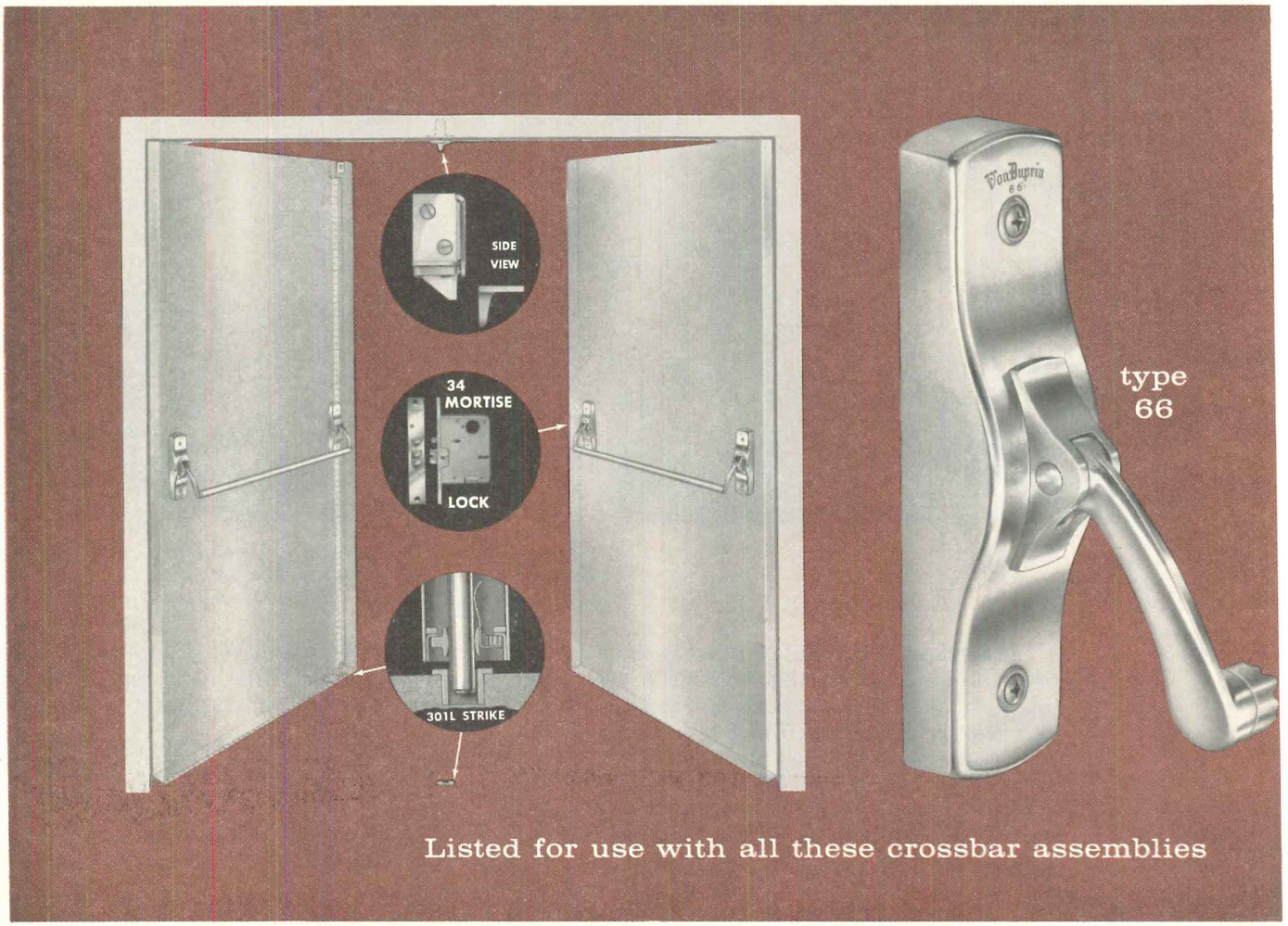
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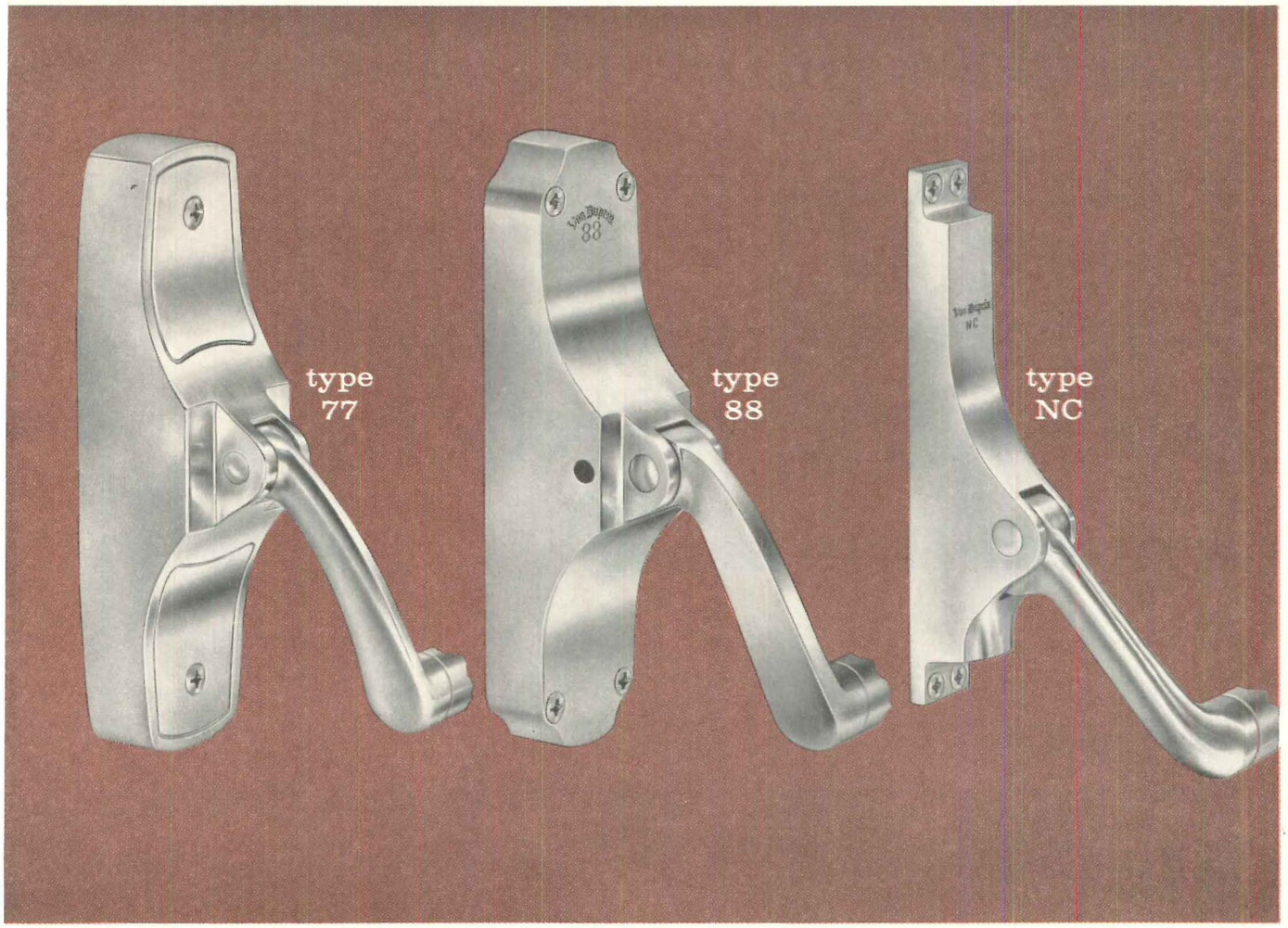
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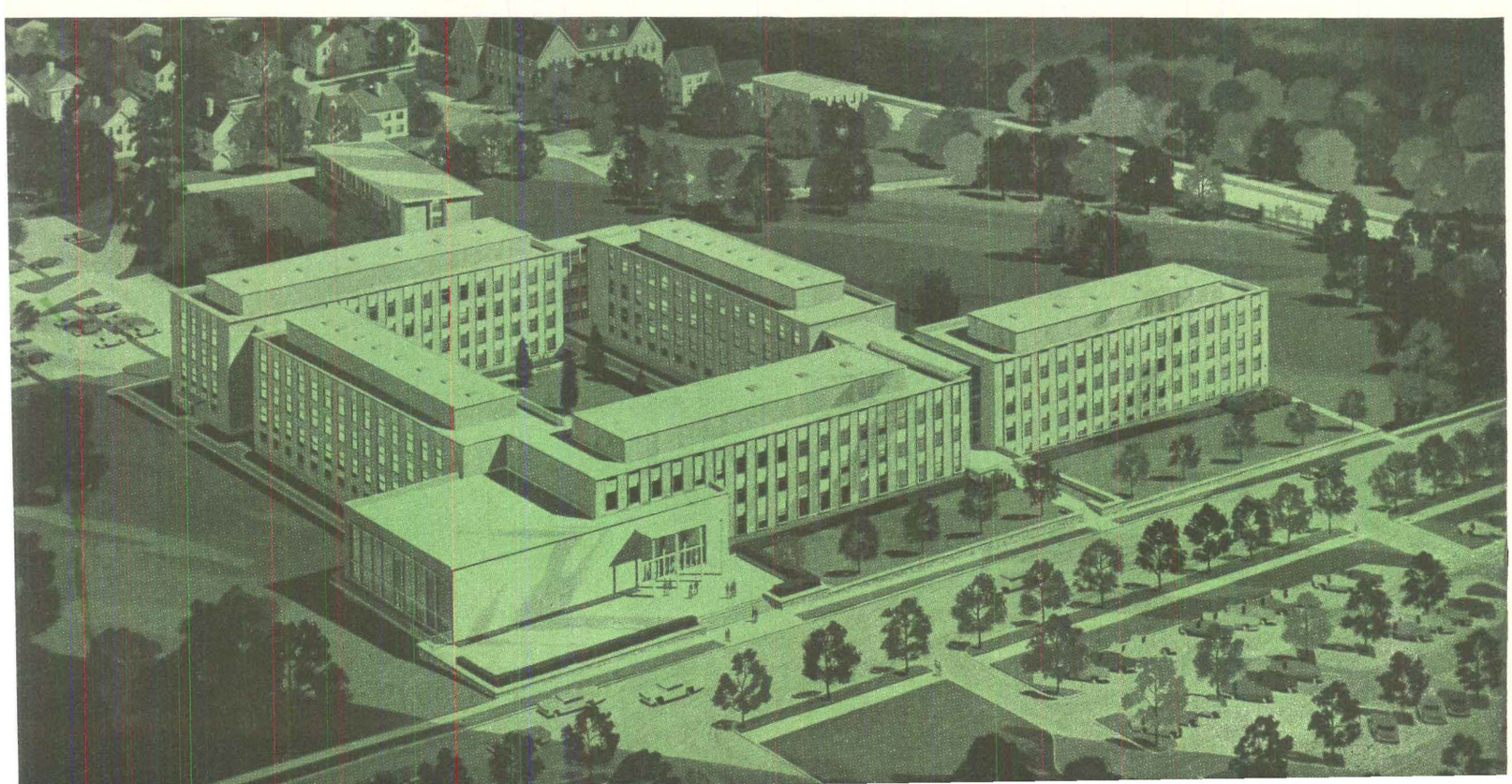
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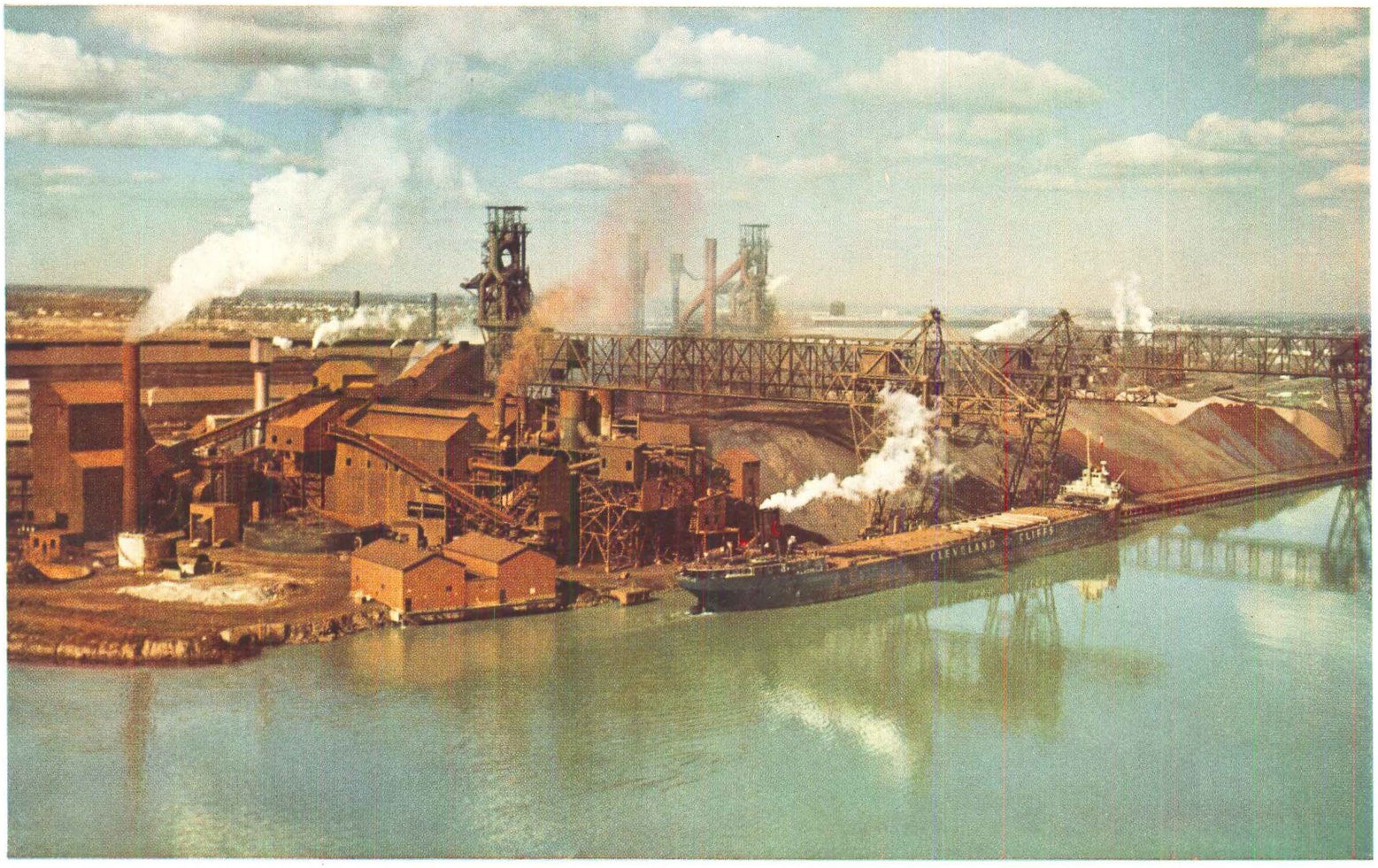
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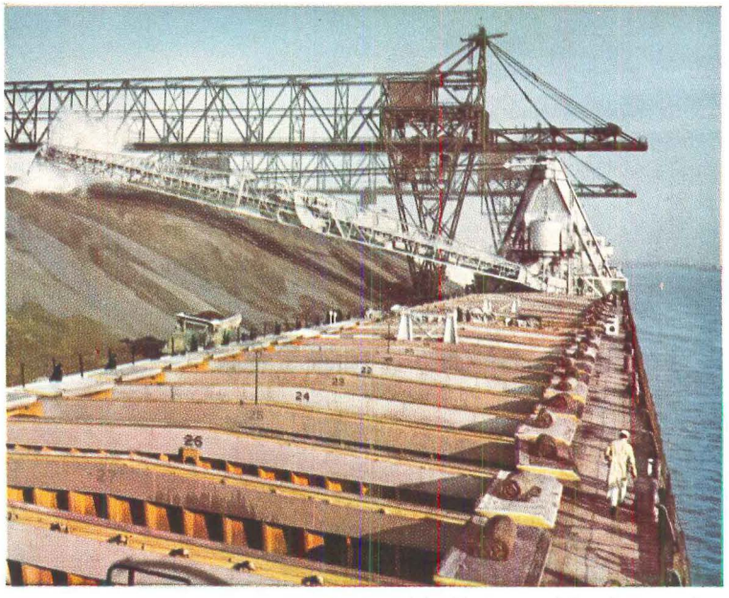


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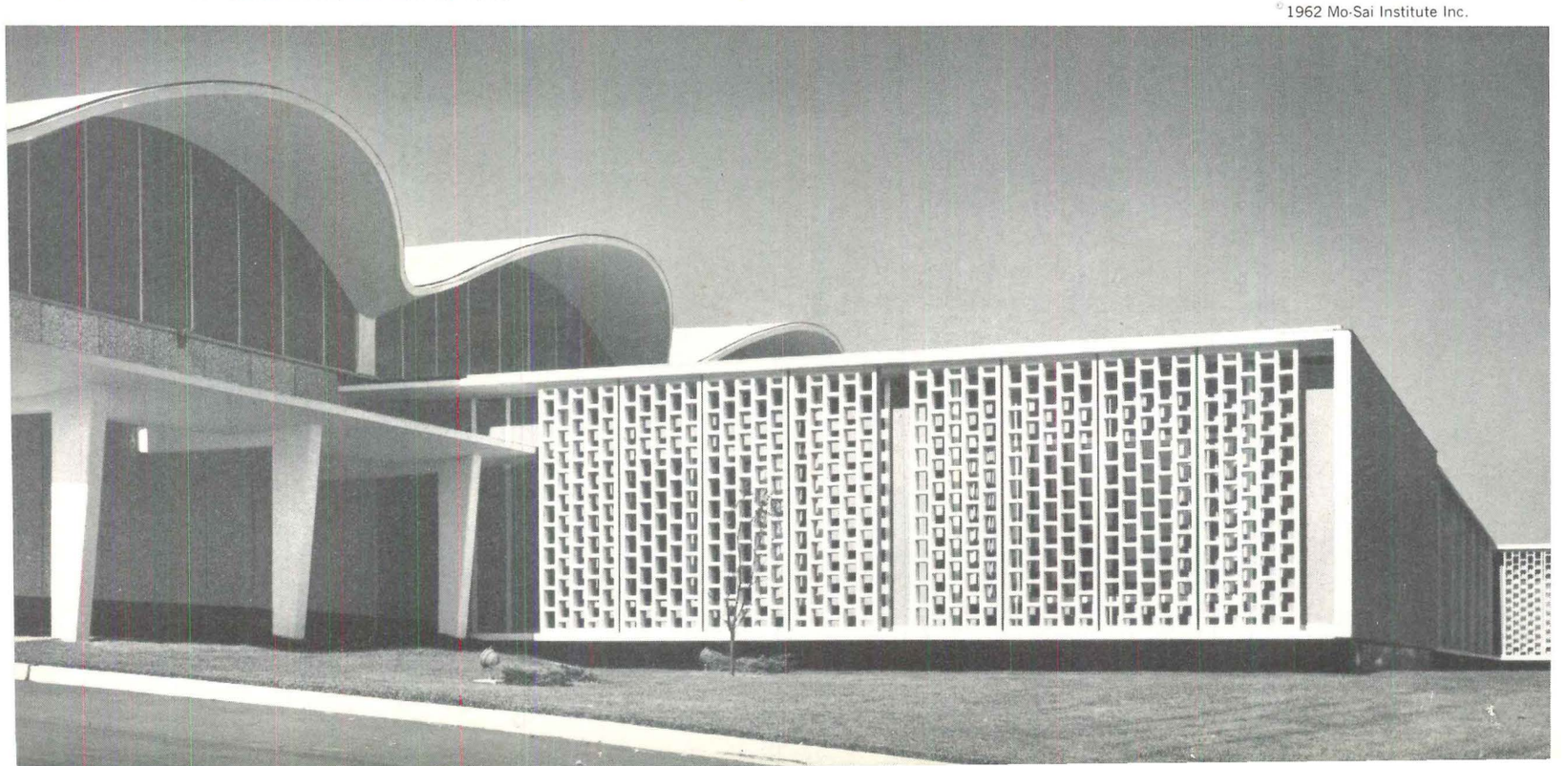
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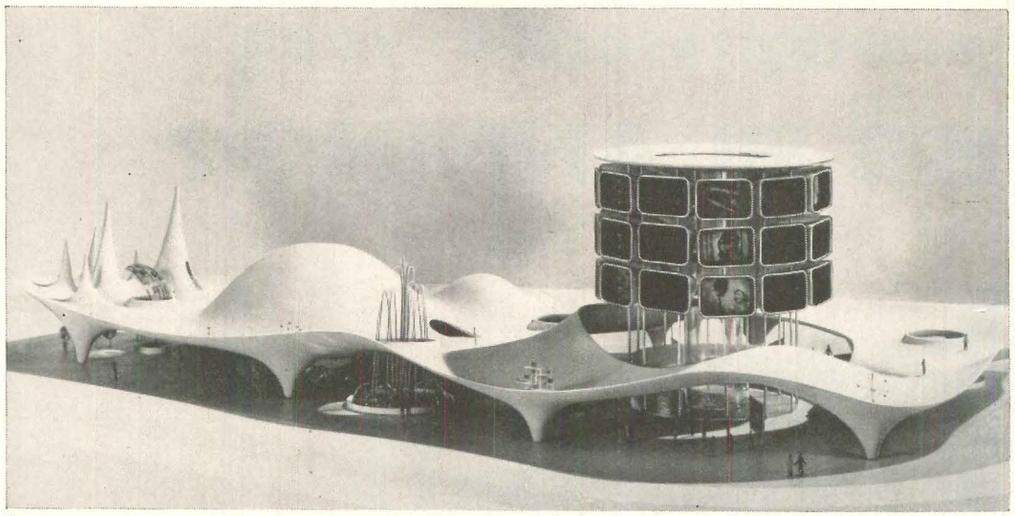
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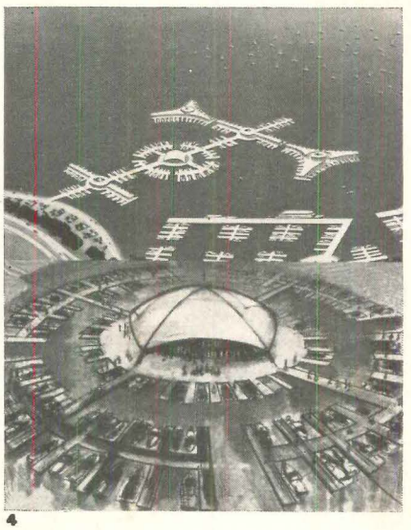
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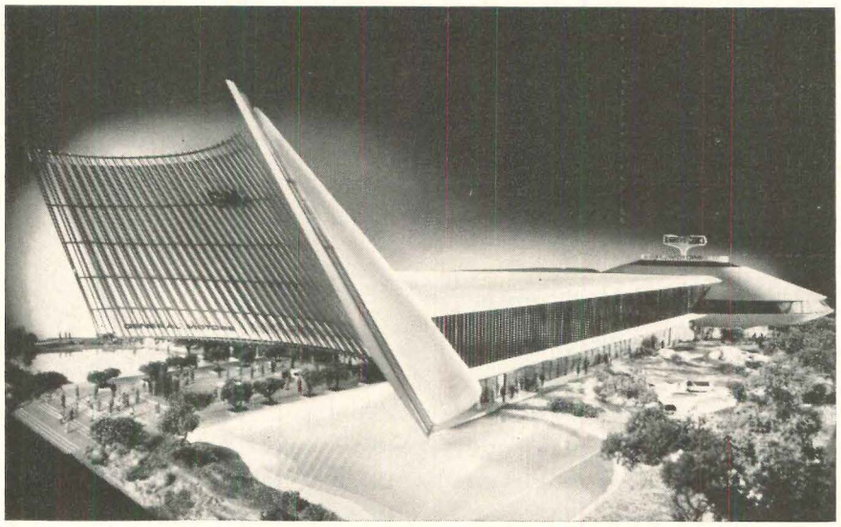
Six designs for the New York World's Fair (below)
Green light for Boston's Prudential Center (page 37)
Cone-shaped motel in New Mexico (page 39)



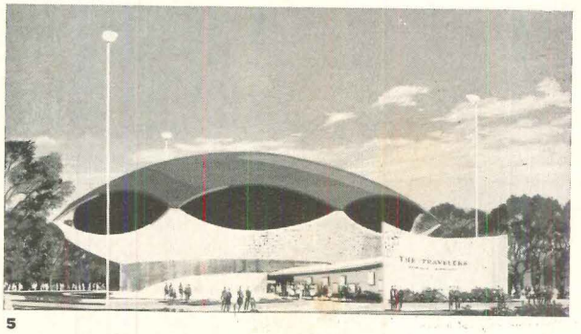
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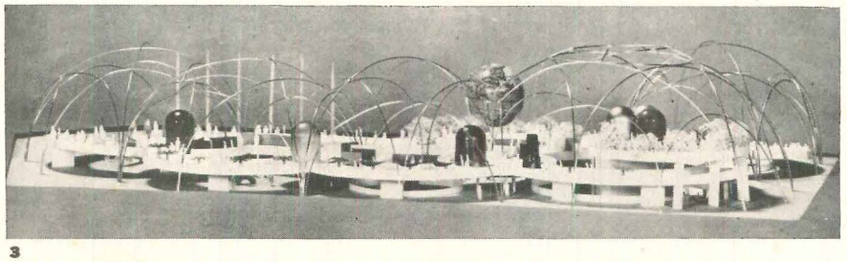
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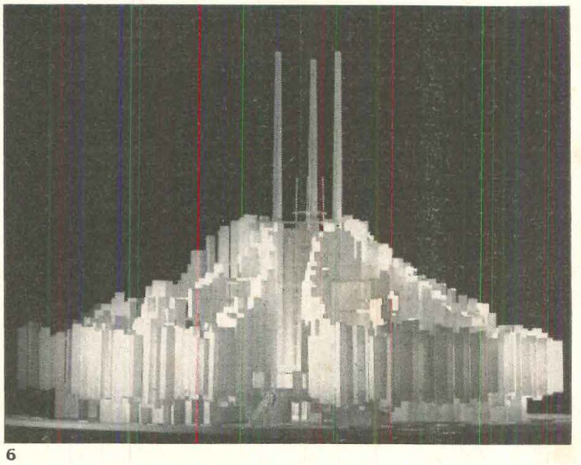
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5



3



6

1. KODAK PROJECTOR. A tower 80 feet high will display enormous color photographs in Eastman Kodak's pavilion planned for the 1964 New York World's Fair, and a domed theater (at left) will show continuous films. Camera buffs will be able to study photography's progress, and shoot gardens, fountains, and each other amid the undulations of the plateau on which the tower stands. The concept is by Will Burtin; the architects are Kahn & Jacobs.

2. GENERAL MOTORS FUTURAMA. The entrance to GM's Fair building will be a tilted canopy ten stories high, complete with Cadillac grille and fins. Inside, a new version of the 1939 Futurama will transport 70,000 people a day into tomorrow; at the back, a domed pavilion will display company products. Building and exhibits were designed by the GM Styling Staff, with Architect Sol King and Albert Kahn Associated Architects & Engineers.

3. BUSINESS-MACHINE PAVILION. Glittering hoops forming golden domes will adorn a business-equipment pavilion for industry exhibitors without pavilions of their own. Sponsors: Unified Management Consultants, Inc. Architect: James Stanley Goldstein.

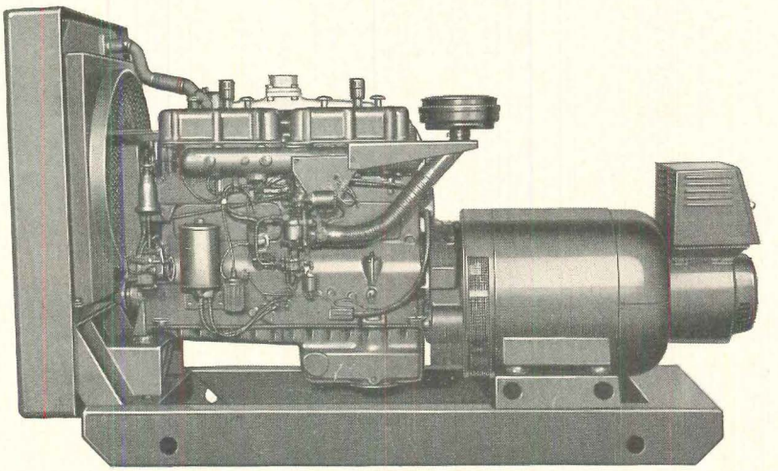
4. MARINA OF THE FUTURE. Moored in Flushing Bay near the Fair, the Marina of the Future will be a series of satellites on glass-fiber pontoons, each with a service core under a canopy (see detail). Designed by Peter Schladermundt Associates for Owens-Corning Fiberglas (who are collaborating in development and engineering), the marina will be privately built and operated.

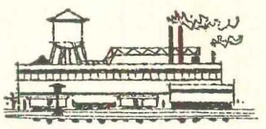
5. TRAVELERS' UMBRELLA. The big red umbrella that the Travelers Insurance Companies now hoist symbolically above their policyholders will in fact shelter visitors in this design by Donald Deskey Associates, Inc. for the Travelers pavilion. Architects: Kahn & Jacobs.

6. TOWER OF LIGHT. A "pavilion of light prisms" by Robinson-Stern Associates, Inc. will replace an earlier design for the Electric Power and Light Exhibit. Staggered prisms and 60-foot pylons will be bathed in colored lights.

continued on page 37

is STAND-BY
a big enough word in your
POWER PLANNING?





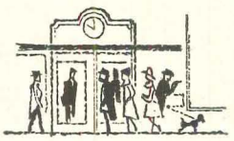
FOR INDUSTRY

Production lines, data processing equipment, office machines, lights and procedures of various types and kinds depend on electricity for power. Every additional piece of such equipment demands more power and requires additional stand-by power to meet vital emergency needs. Are your stand-by recommendations adequate?



FOR HOSPITALS

Only thirty-five per cent of all hospitals have sufficient stand-by power to meet every emergency in every part of a hospital. New wards, extra equipment, modernization programs call for more and more power. Can every patient be provided with all of the essential services when power failure hits?



FOR BUSINESS

Extra elevator, escalator facilities, improved lighting systems, added bookkeeping equipment, inter-office communications systems, air conditioning all call for extra power, more wattage. Can present stand-by plants supply full power for every new facility installed?



FOR BANKING

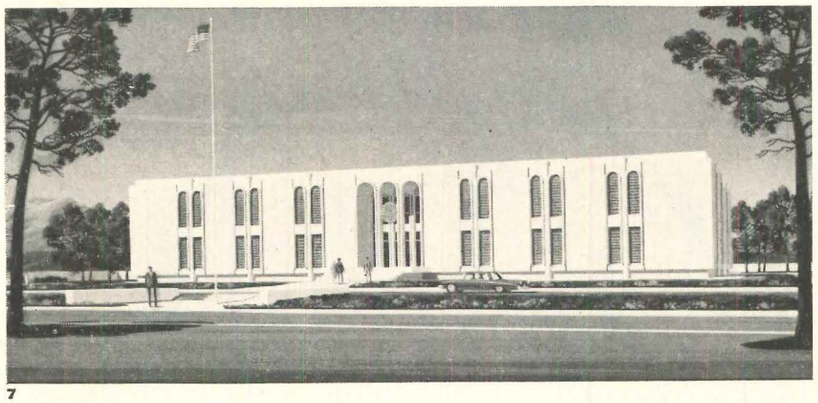
Power bookkeeping has made stand-by power more necessary than ever. Check sorters, computers, market ticker-tapes are constantly increasing the dependency on electric power. How much would a sixty-minute power failure cost your client?

KOHLER OF KOHLER

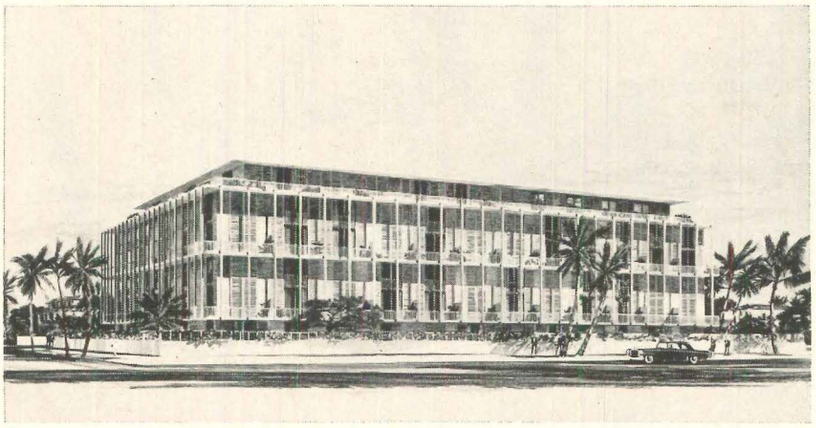
Kohler Co., Established 1873 • Kohler, Wisconsin

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

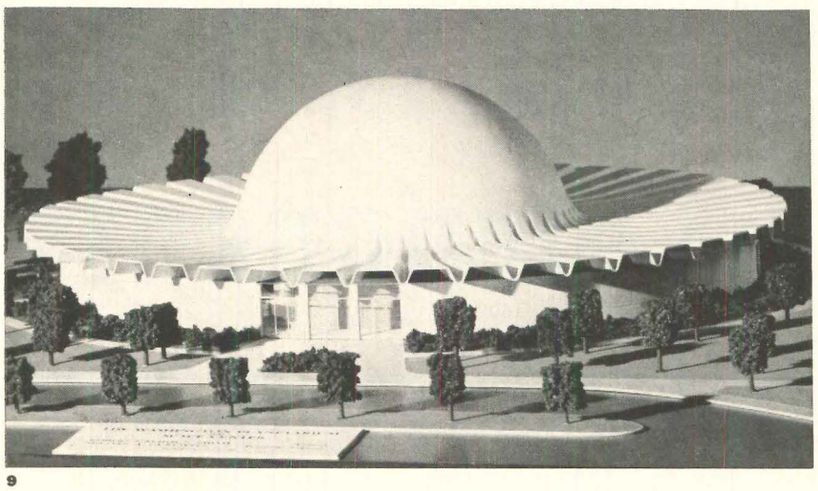
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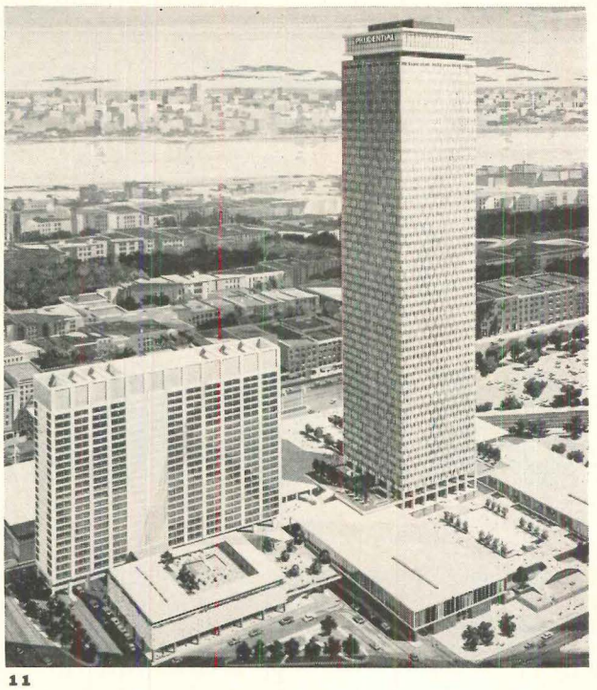
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7. *U.S. EMBASSY IN KABUL.* In Kabul, Afghanistan, the new U.S. Embassy buildings will occupy 15 acres for an ambassador's residence, apartment buildings, and recreational facilities. First to go up will be these offices of precast concrete brick and marble, their design reflecting something of the native architecture in the use of all-white materials and arched windows. Architects: The Ballinger Co. of Philadelphia.

8. *PALM BEACH APARTMENTS.* Work on these luxury apartments in Palm Beach will be rushed through the summer to insure their being ready for the start of the winter season. Sixty-four apartments, to rent from $5,200 to $11,500 per year, will be screened from the sun by a lacy metal grille, designed by Edward Durell Stone for Childs Securities Corp. Cost: $3.5 million.

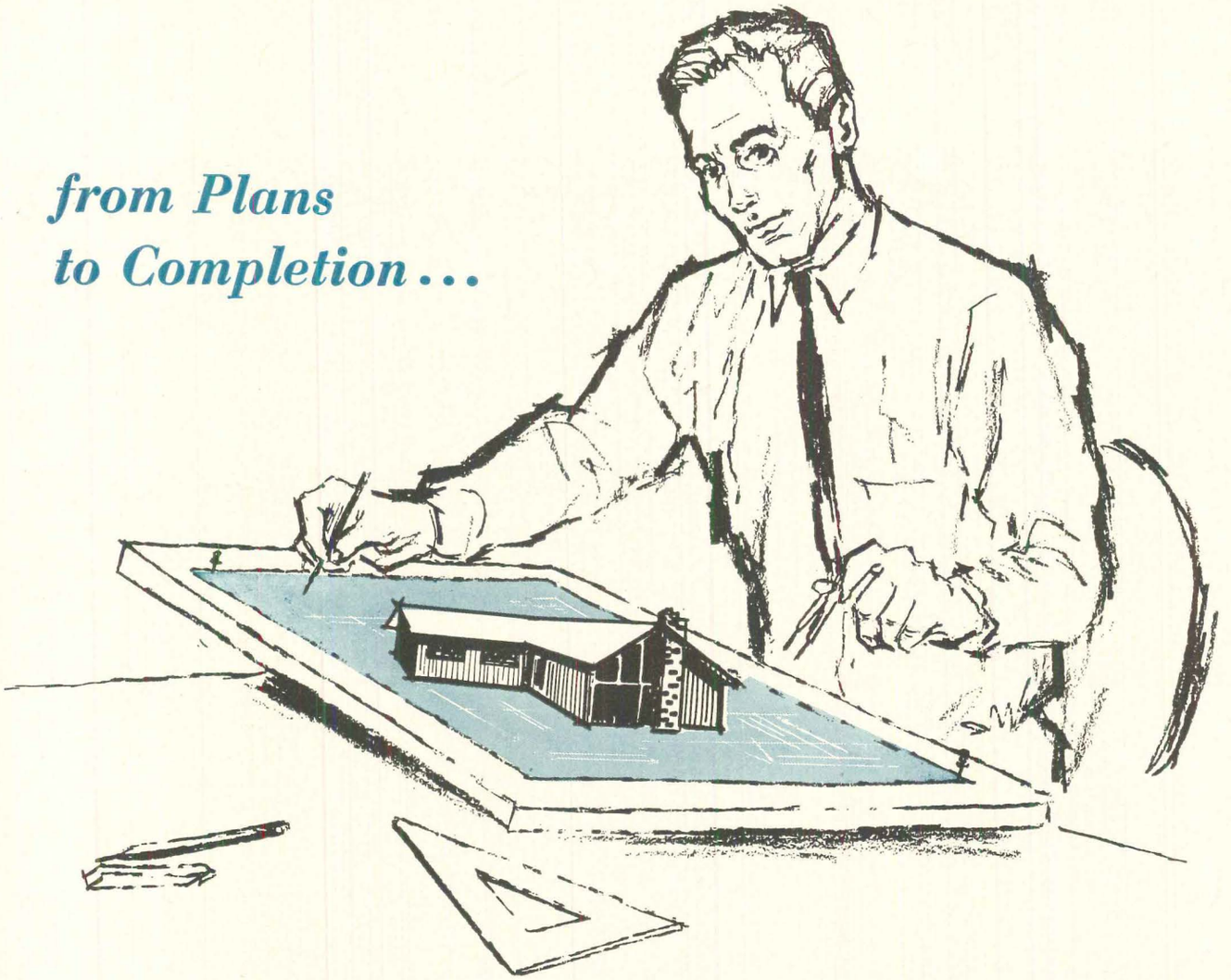
9. *WASHINGTON PLANETARIUM.* A nonprofit group, the Washington Planetarium and Space Center, proposes this hat-shaped hall for a U.S. Park Service site south of the Washington (D.C.) National Airport. The preliminary plan by Architect Robert Calhoun Smith shows a concrete dome 85 feet in diameter over a saucer of folded plate concrete.

10. *NORTH CAROLINA BANK.* Hampered by a narrow site, the Wachovia Bank & Trust Co. in Raleigh, N.C. will sink its main banking level beneath an entrance floor. By doing this, the bank's architects, A. G. Odell Jr. & Associates, figure they can squeeze an extra 5,000 square feet of space from the building line out under the sidewalks on all four sides. Cost: $3 million.

11. *BOSTON CENTER.* Long in the planning stage and beset by legal troubles, the Prudential Center in Boston seems to be on its way at last. Construction contracts have been awarded to the Perini Corp., Perini Ltd., and Walsh Construction Co., Inc. for a revised 52-story Prudential Tower, four commercial buildings, plazas, and garages. This portion is to be finished in 1964, at about the same time as the hotel (FORUM, April '62). Co-ordinating architects: Charles Luckman Associates; Hoyle, Doran & Berry, associates.

continued on page 39

from Plans to Completion...



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Gang-Nail Components reduce construction time (& money)!

Starting with engineering time, it's drastically reduced. Estimating time on lumber for the entire 'bone structure' of your home is completely eliminated. (Errors, too.) And in hours after the side walls are up, you can be roofed-in.

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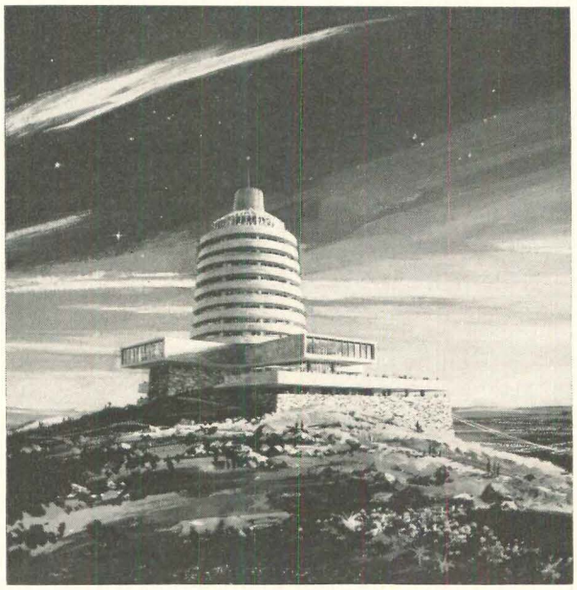
GANG-NAIL FABRICATOR LICENSES ARE AVAILABLE IN MANY STATES INCLUDING A FEW SELECT METROPOLITAN AREAS. PHONE US COLLECT TODAY.

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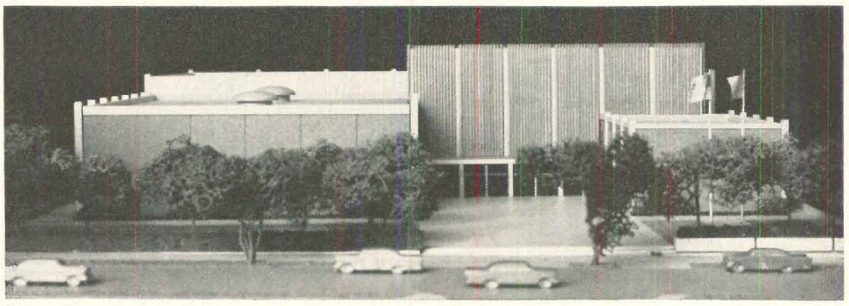
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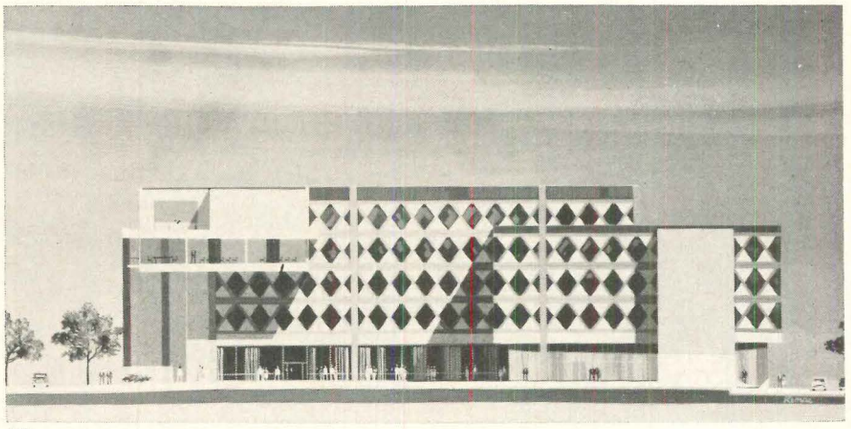
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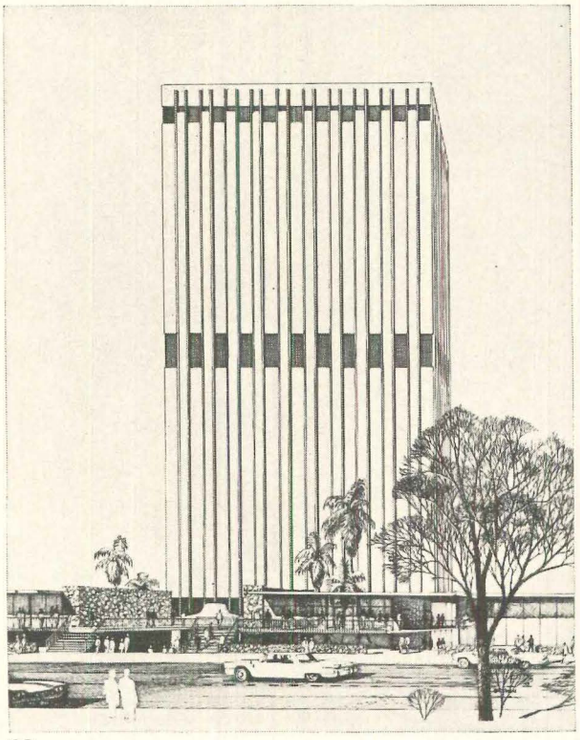
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12. *NEW MEXICO HOTEL.* A revolving restaurant like others by the same architect in Seattle and Honolulu will crown the Cable Car Lodge at South Sandia Peak, near Albuquerque. The 64-room lodge will be the terminus of a cable-car ride from a hotel, motel, and shopping center 3½ miles away, all designed by John Graham & Co., in hopes of snaring paying tourists from Albuquerque's million annual visitors.

13. *FRESNO OFFICES AND HOTEL.* In a single 20-story tower in Fresno, Calif., Developer Del Webb plans to stack 200 hotel rooms and two floors of restaurants above 85,000 square feet of offices, with shops and garages below. Architects: Flatow, Moore, Bryan & Fairburn; Litzie & Daley.

14. *COLUMBIA GYM.* A corner of Morningside Park in New York City has been leased to Columbia University for an undergraduate gymnasium with the stipulation that a separate gym in the lower portion, supervised and staffed by Columbia, will be for the use of teen-age boys in the community. Directly behind the entrance will be the main gymnasium and to the left, swimming and diving pools and special tanks for coaching. Architects: Eggers & Higgins; Sherwood, Mills & Smith.

15. *PHILADELPHIA OFFICES.* Big diamond-shaped windows will punctuate the façade of the new office building the American Society for Testing and Materials plans to erect on the site of its present building on Philadelphia's Logan Square. The window openings are shaped by latticed steel trusses, each a story high, and will be framed in bronze and filled with gray glass. Architects: Carroll, Grisdale & Van Alen.

16. *CHICAGO HOTEL.* A $20 million hotel is the harbinger of a lake-front plan by A. Epstein & Sons for the Aristocrat Inns of America (AIA), to add 2,000 hotel and motel rooms to the immediate vicinity of McCormick Exposition Hall. An outside glass elevator will whisk guests to a lozenge-shaped restaurant and observation tower atop the main McCormick Inn. Clustered at the base: motel rooms, banquet halls, swimming pools. END



North Attleboro (Mass.) Jr. High School. Architects: Haldeman & Jacoby, Brockton, Mass.

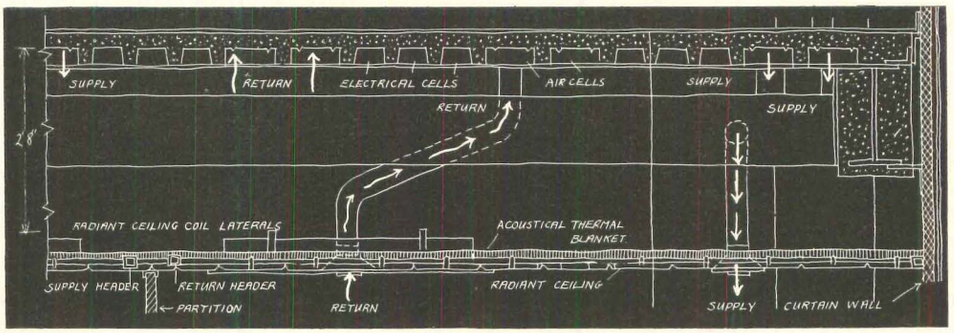
...GUARANTEED AIRTIGHT, WATERTIGHT, PERMANENTLY

Twenty-eight self-flashing Twin Dome® acrylic skylights illuminate this 5,074 square foot gymnasium without risk of heat gain, heat loss, or condensation. This first totally-proven, permanently-sealed dome-within-dome design is guaranteed watertight and airtight. It maintains a constant 0.57 U-factor. In all, 187 low-silhouette Twin Dome units bring evenly-diffused, glare-free daylight into all classrooms and corridors, as well as the gymnasium. ■ A complete range of 19 self-flashing and curb-mounted sizes enables the architect to blend Twin Dome units with any roof or building design. Choice of clear, white-translucent or dense white inner and outer acrylic domes permits control of light levels. Twin Dome units are shatterproof, weather-proof and maintenance-free. The self-flashing model can be installed in 15 minutes. ■ For full details, see Sweet's Architectural File 20a/Wa or write Cyanamid.

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Structural floor supplies indoor climate (below)
Two acoustical ceilings: luminous and washable (page 42)
Thermoelectric refrigerator and air conditioner (page 43)



NEW FLOOR–CEILING SYSTEM

A structural floor and suspended ceiling system that has no new parts, yet is brand new as a system, promises important savings in both the construction and operating costs of multistory buildings. Inland Steel Products' four-component package, the *Integrated Air Floor System,* heats, cools, and chemically cleans air circulating through the subfloor. In effect, the building's climate becomes part of its structure.

The two components shown in the drawing above are Inland's own cellular steel flooring, Celluflor, and Burgess-Manning's Radiant Panel Ceiling; these distribute air and water simultaneously. Outdoor air, as it enters the building, is heated in winter, then passed through a Kathabar Chemical Air Conditioner, which controls humidity and removes impurities and bacteria. This clean, conditioned air moves through shafts and supply header ducts into Celluflor cells which, in turn, supply ceiling diffusers and perimeter registers. Used air follows a reverse path through adjacent cells; half of it is exhausted outdoors, the remainder mixed with the new supply as it enters the building.

Heated or chilled water runs through coils in radiant ceiling panels. During the winter cycle pictured, for example, separate systems for interior and perimeter rooms draw excess heat from the interior (arrows pointing up) and transfer it to the perimeter (arrows pointing down), where more heat is needed. The transfer apparatus is the fourth component, a standard refrigeration plant acting as a heat pump.

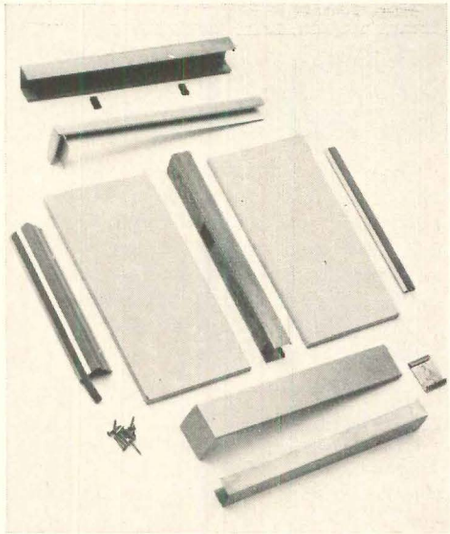
With this system, Inland claims substantial savings in first costs: shallow floor-to-floor space cuts down the materials needed, i.e., 20 stories can be built in the same overall height normally required for 19. In completed buildings, the annual operating expense of the air-conditioning system drops 25 to 35 per cent below that of conventional systems, Inland estimates.

Another benefit, though less tangible, is the comfortable environment which this system is said to supply, leading to improved efficiency and better health among employees.

Manufacturer: Inland Steel Products Co., 4143 W. Burnham St., Milwaukee 1, Wis.

DEMOUNTABLE PARTITION

The ten assorted parts shown in the photograph below are all it takes to make National Gypsum's *Contempo-Wall,* a new movable floor-to-ceiling office partition which is easy to install, easier to demount, and completely salvageable.



The parts are steel studs; anodized aluminum floor and ceiling tracks, battens, ceiling and base plates; gypsum wallboard panels (two prefinished, one ready for painting); and clips and screws.

The studs are of three sizes, to make walls 2⅝, 3½, and 4⅝ inches thick. Contempo-Wall's sound-transmission loss, measured under test conditions, averaged 41 decibels over a frequency range of 500–4000 cycles. The cost is about $12 to $16 per lineal foot, installed.

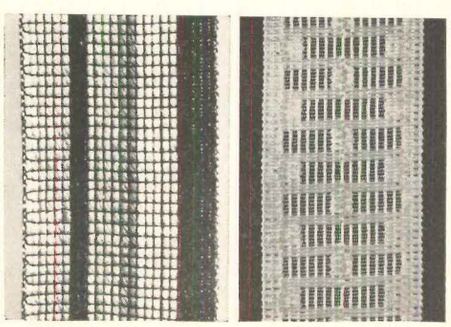
Manufacturer: National Gypsum Co., Buffalo 2, N. Y.

COLORFUL BLINDS

Applying new materials and imagination to windows in today's buildings, the Lozano-Fisher Studios have come up with a series of woven vertical blinds that are colorful, practical, and flameproof. Four distinct groups make up the series, called collectively *Verti-Color Blinds* and sold by a subsidiary of Lozano-Fisher.

In the first group, for windows that get a great deal of sun, is a double-faced solid louver, one side of Roman-striped wool, the other of asbestos-glass fibers in their natural color (left below). Closed, the blinds blot out sun by exposing the asbestos-glass side to the exterior, keeping the brightly colored wool away from direct sunlight. An office building, for example, would present a uniform appearance from the street whether all blinds were closed or open; actually each room's blinds might be in quite different colors.

Two other groups are woven in lacy patterns that allow a good deal of light to pass through. These are a new vinyl-coated glass yarn from Owens-Corning Fiberglas (right below) and a plastic Rovana yarn from Dow. Both materials resist acids, flame, sun, and mildew and need only a dip in sudsy water to be cleaned.



continued on page 42

continued from page 41



The increasing need for expediting the handling, distribution, and processing of paper in today's complex business operations places an added responsibility on the architect.

Now, the LAMSON AUTO-TUBE provides a simple, space-saving way to design a rapid communications system into any structure long before ground-breaking ceremonies are scheduled.

AUTO-TUBE makes it possible to deliver enormous quantities of mail and other paper . . . quickly and continuously . . . to any number of locations . . . within any building complex. The operator dials the LAMSON carrier, then puts it into the AUTO-TUBE sending receptacle. The completely automatic system, with its controlled dispatch feature, does the rest.

Check LAMSON before specifying any other method of built-in communications. Write 112 Lamson Street, Syracuse, New York.

LAMSON CORPORATION

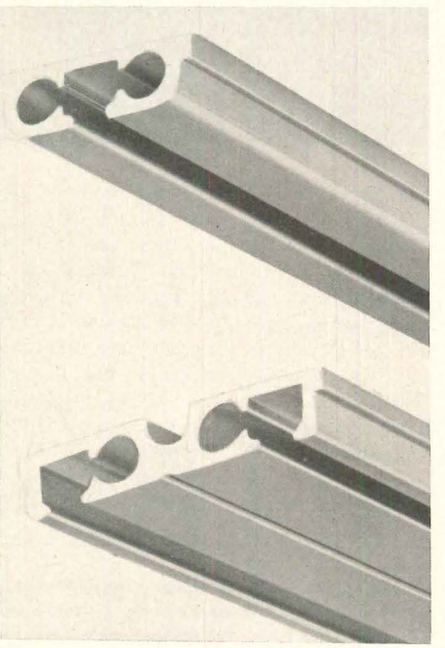
Blends of wool and viscose make up the last group; some are quite sheer, and others have a solid weave.

Cost: about $2 a running foot (4½ and 5 inches wide), not including hardware.

Manufacturer: Verti-Color Blinds, Inc., 64 E. 55th St., New York 22.

QUIET DRAPERY TRACK

Although not completely hidden from view, *Silent Gliss* drapery track, a Swiss design now manufactured in the U. S., is about as small and unobtrusive as a track can be and still work in big windows. Silent Gliss is a slim aluminum extrusion coated with silicone inside so that drapery cords slide easily and



silently. These cords are kept separate and partially enclosed in channels to prevent them from tangling or sagging. Most tracks in the new line are ceiling mounted and are strong enough to support long spans of heavy fabric. Other tracks are designed for special uses: hospital cubicles, theater curtains, boat bunks.

Cost: about $1.50 to $2 per foot for cord-drawn tracks, installed; 75 cents to $1 per foot for hand-drawn tracks.

Manufacturer: Silent Gliss, Inc., Freeport, Ill.

WASHABLE PANELS

Armstrong's Minaboard and Acoustical Fire Guard lay-in ceiling panels can now be washed often—daily, if necessary—without losing their acoustical value. A protective film of Mylar polyester, stretched over the panel and cemented to the edges, keeps the porous core of the panel from getting wet without decreasing its acoustical properties—the film acts as a diaphragm to transmit sound energy into the core. Repeated washing with detergents and germicidal cleaners will not harm the film nor affect its diaphragm action. *Armstrong Mylar-faced Acoustical Ceilings* were developed expressly for hospitals, restaurants, food-processing plants, and laboratories—for any installations, in short, where cleanliness is of particular importance.

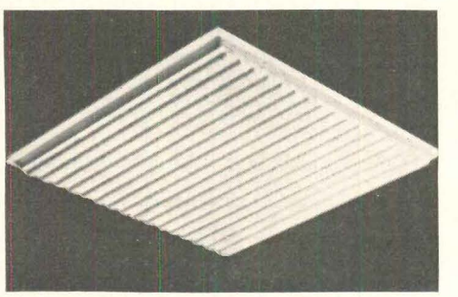
Mylar facing adds about 10 per cent to the cost of the panel: Minaboard thus treated costs 50 to 55 cents per square foot installed; Acoustical Fire Guard, 65 to 75 cents.

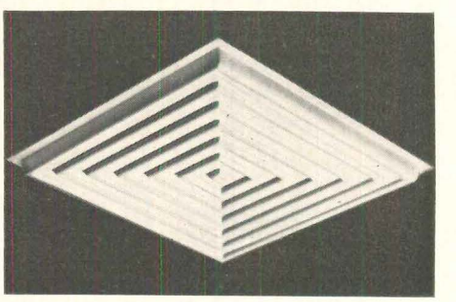
Manufacturer: Armstrong Cork Co., Lancaster, Pa.

DOUBLE-FUNCTION CEILING

A translucent ceiling which diffuses light and absorbs sound has been put on the market by Elof Hansson, Inc. It is called, descriptively enough, the *Hansoglow Acoustical-Luminous Ceiling.*

Individual ceiling panels, which fit into a standard 2 by 2-foot grid, are thin sandwiches consisting of a perforated rigid vinyl septum, faced with sheets of porous acrylic, the three layers forming a panel 0.018 inches thick. Hansoglow panels have a noise reduction coefficient of 0.70, a light transmission factor of 50 per cent, and a reflectance factor of 46 per cent.





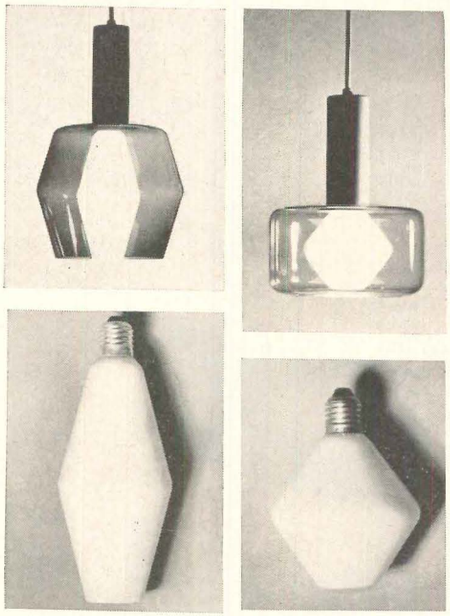
Offered in six designs (two of which are shown in photos), these double-purpose panels are "similar to or slightly higher in cost than good-quality luminous ceilings," according to the manufacturer. Panels of special sizes and shapes may be ordered.

Manufacturer: Elof Hansson, Inc., 711 Third Ave., New York 17.

FINNISH LAMPS

These shapely light bulbs, designed by Finnish Artist Tapio Wirkkala, are the basis of some 26 lamps imported by Intercontinental

Sales & Service Co. of Detroit. The bulbs may be used alone or combined with glass shades and metal sleeves to make different fixtures, two of which are shown below.



The bulbs fit standard American 110–120 volt sockets, come in 40- and 60-watt intensities, and cost $2.50 each (retail). Complete lamps—with clear glass shades in blue, mauve, and smoke, metal sleeves in white, black, and copper—range from $17 to $54 (retail). Oy Airam Ab of Helsinki manufactures the bulbs; Idman of Finland, the fixtures.

Importer: Intercontinental Sales & Service Co., 14615 Grand River Ave., Detroit 27.

GLASS-FIBER VEIL

Belying its flimsy appearance, a new nonwoven fabric called *Fiberil* offers tough protection for reinforced glass-fiber structural panels, chemical storage tanks, outdoor signs, and ventilating ducts. Fiberil is made of Union Carbide's Dynel modacrylic fiber, which stands up well to weather, chemicals, and ultraviolet light (its first building application was on a geodesic dome in the Arctic).

The crucial problem in protecting reinforced glass fibers is the tendency of the gel coat or surface resin layer to shrink and crack as it cures, exposing the glass fibers underneath. Fiberil, applied as a topcoat, helps prevent shrinkage and exposure of the glass fibers; it can also be buffed to a smooth finish, for use as is or ready to paint. Wetting the fabric in the laminating process makes it transparent so that the addition of the fabric does not change the color or the transparency of the panel beneath.

At present, two weights are available: one costs 19 cents for a yard 38 inches wide; the other has not been priced.

Manufacturer: Industrial Division, Pellon Corp., 350 Fifth Ave., New York 1.

THERMOELECTRIC PRODUCTS

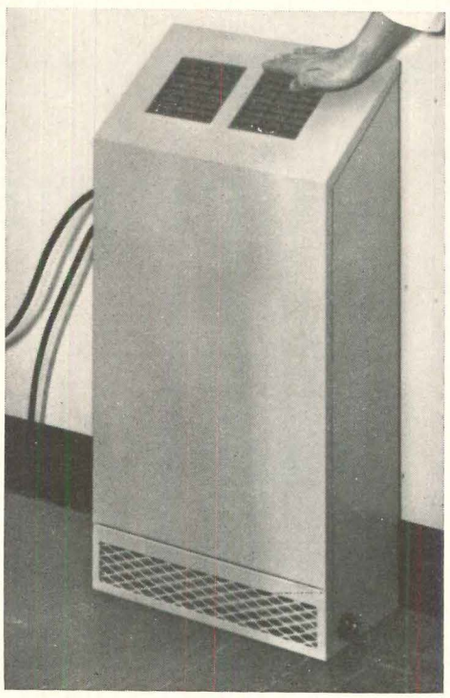
Borg-Warner has announced two more commercial thermoelectric products since its ice-cube maker (FORUM, April '62): a small refrigerator and an even smaller air conditioner (below). Both will be available in the next few months, probably by early fall.

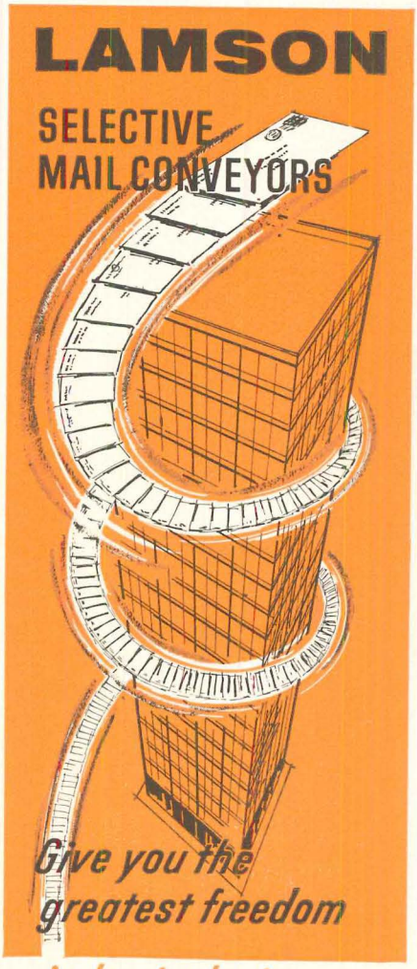
The Norge Division's refrigerator has a capacity of 2 cubic feet, a fraction of the size of a conventional family refrigerator. Its size and cost so far would seem to rule out widespread family use, but Norge sees a market for it in doctors' and dentists' offices, executive suites, and country clubs, and possibly in large apartments and homes that need a second refrigerator. Price of the first units: about $500 to $600 each.

The York Division's thermoelectric air conditioner, of ¼-ton capacity, is similar in type and concept to much larger models York is developing. In this size, it is intended for special use in medical clinics and research laboratories. The cost, again, is high —three to five times that of a conventional unit, but should come down.

Manufacturers: Norge Division, Borg-Warner Corp., Merchandise Mart, Chicago 54; York Division, York, Pa. END







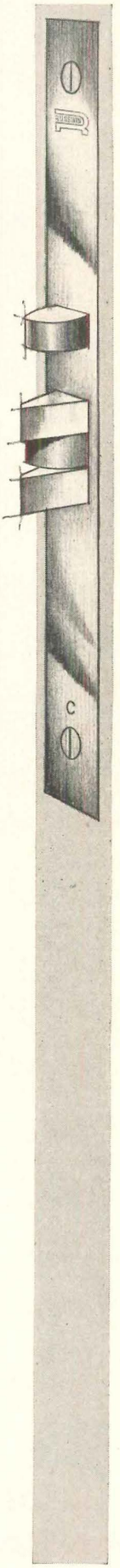
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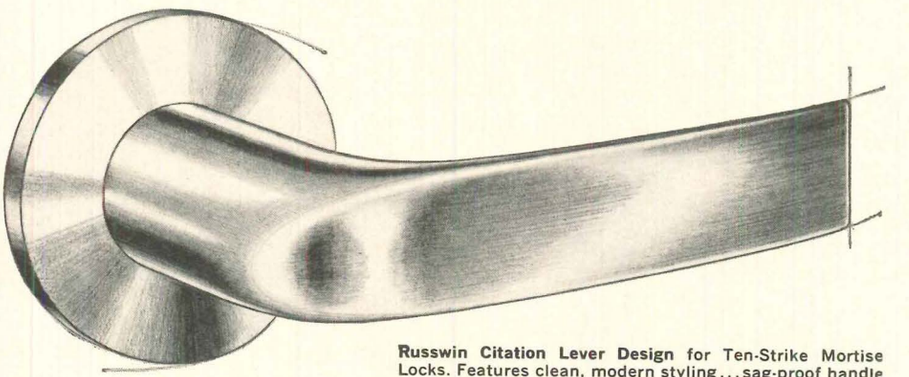
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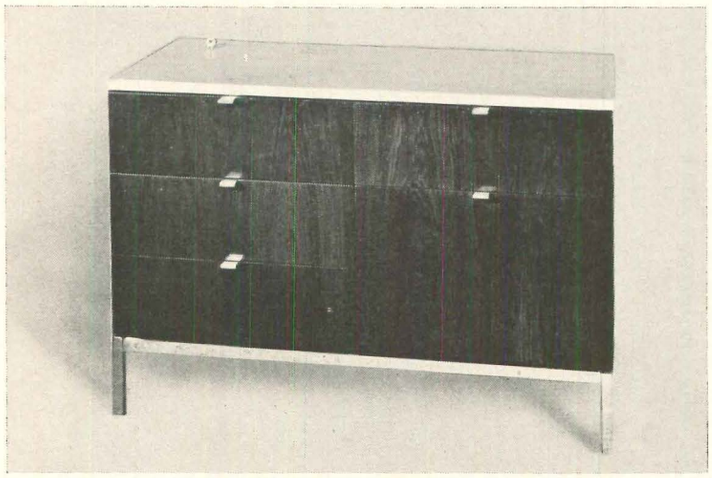
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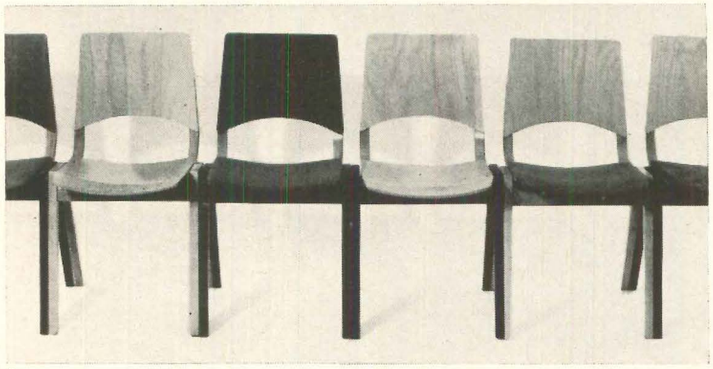
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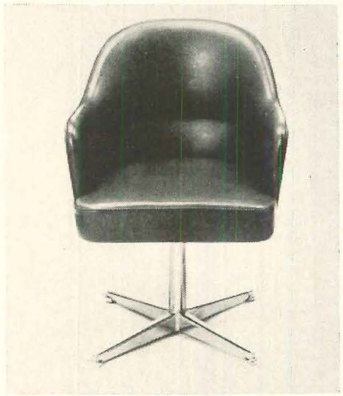
A new FORUM *department: this month, nine designs for offices*



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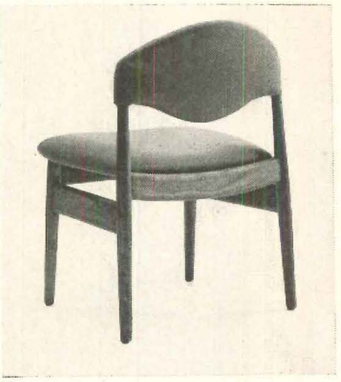
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8



9

1. This small cabinet by Florence Knoll of Knoll Associates provides the deskless or storage-shy executive with the space normally found in desk drawers. This version is rosewood and marble on a steel base; drawers are locked through the top. Also available in teak with a marble or white plastic top. List price: $745.

2. Stacking chair of teak or beech is from the Hanseatic Collection of European furniture imported by Design Distributors of New York City. The chairs may also be fastened together, as shown here. This design, by Prof. Rainer, costs $20.

3. Its swivel mechanism hidden in a polished aluminum base, the Boardroom Chair from JG Furniture Co., Inc. has contoured upholstery of nylon, plastic, or leather; cost ranges from $225 to $260.

4. Brown-Saltman's chair and ottoman, designed by Gerald McCabe, is upholstered in expanded vinyl in a ribbed design over a chrome-plated steel frame. The chair is priced at $180; the ottoman at $100.

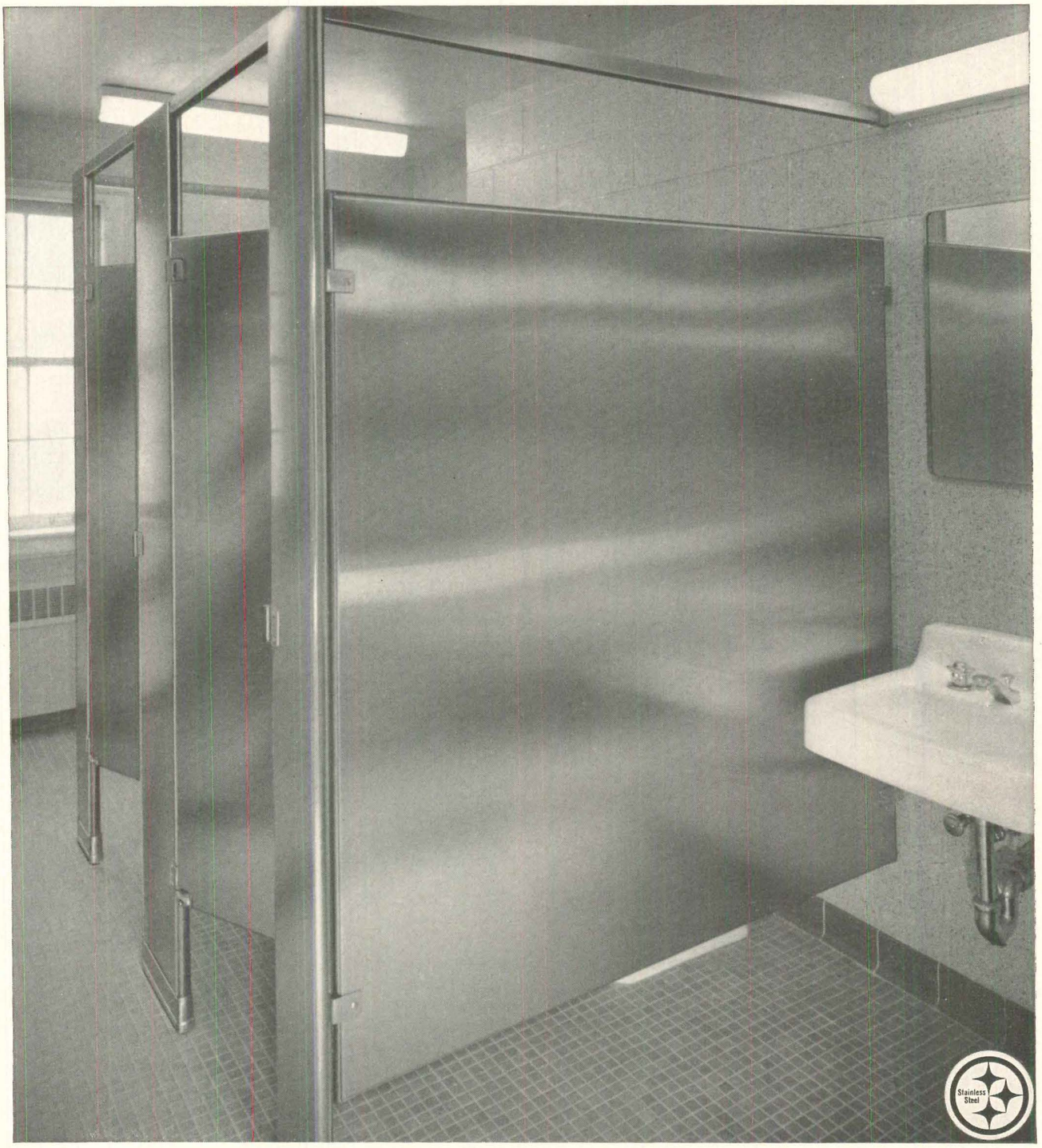
5. A visitor's armchair designed for Dux by Sven Dysthe is one of a new contract group. This one is of walnut and steel and costs $317. The same design comes in palisander and steel, or wood alone.

6. Movable tripod legs under these curved chairs adapt them to spread-out, close-in, or even curved arrangements. They are from Royal Metal Manufacturing Co.'s "Viscount 65" line. Cost: $271 for a two-seater unit.

7. A recess in the lower back of this executive chair by Stow & Davis is intended to provide an extra measure of coolness and comfort. Upholstery comes in fabrics or leather, set over a chrome base. Cost: $460 in leather.

8. Originally developed for the Dorado Beach Hotel in Puerto Rico, this side chair has been added to the Jens Risom line. It has a walnut frame, upholstered seat and back ($229 in leather).

9. Conference table and chairs from the Design Guild of Globe-Wernicke Co. combine walnut and stainless steel with a chrome finish. The chair costs $190; the table has not yet been priced.



Installation: Ventura School for Girls, R. B. Bradford, Director, Department of Public Works, State of California. State Architect: Anson Boyd. General Contractors: C. K.-F-M, San Diego, California.

Nickel Stainless Steel never stops showing off

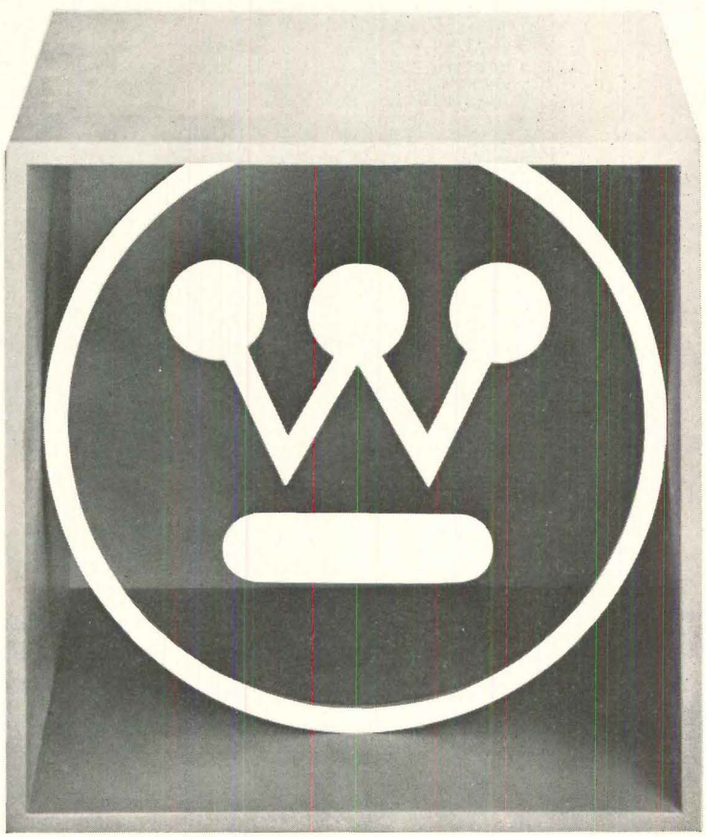
How come? Because it's so easy to keep clean. These toilet partitions – made by the Ferrometal Division of Milwaukee Stamping Co.—are a good example. They're made of nickel stainless steel and will keep this washroom bright and pleasant looking for the life of the building with just a minimum of maintenance.

In addition to being easy to take care of, nickel stainless steel also takes good care of itself. It doesn't chip. It fights off corrosion, and it doesn't stain adjacent materials. In short, nickel stainless steel is the ideal metal for interiors that need good looks, strength and durability. Try it. And for more information, write to The International Nickel Company, Inc., 67 Wall Street, New York 5, N. Y.

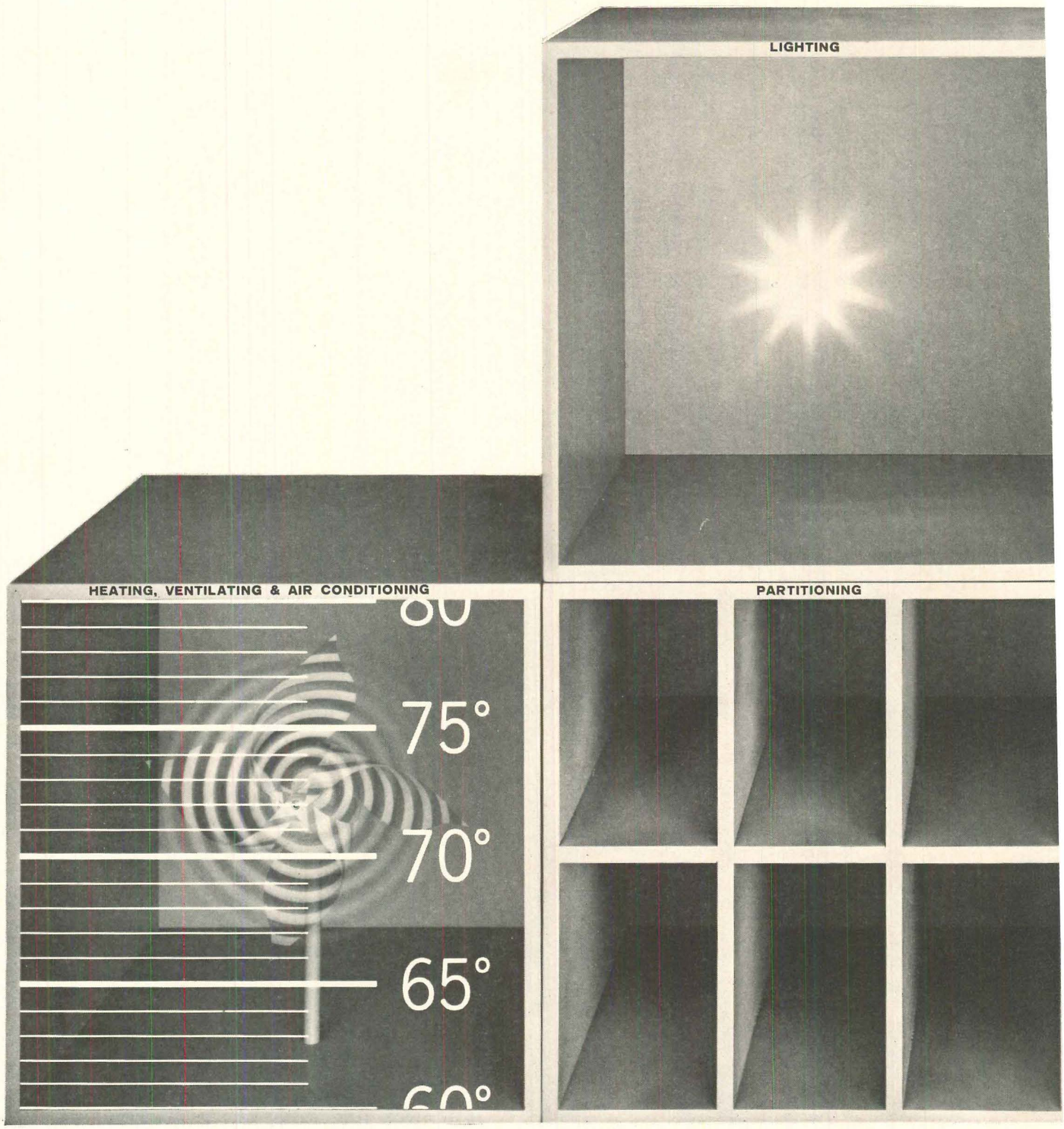
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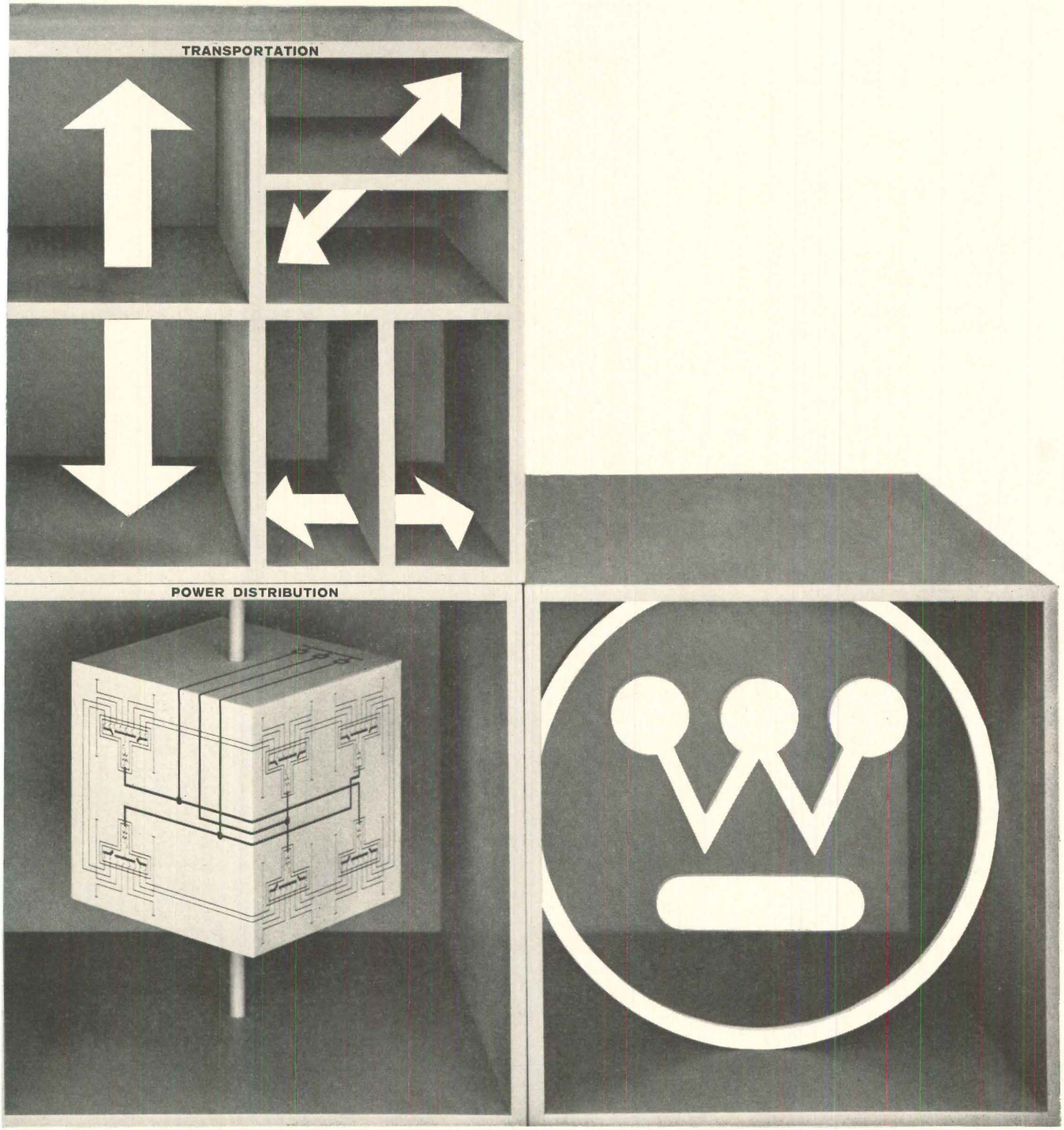
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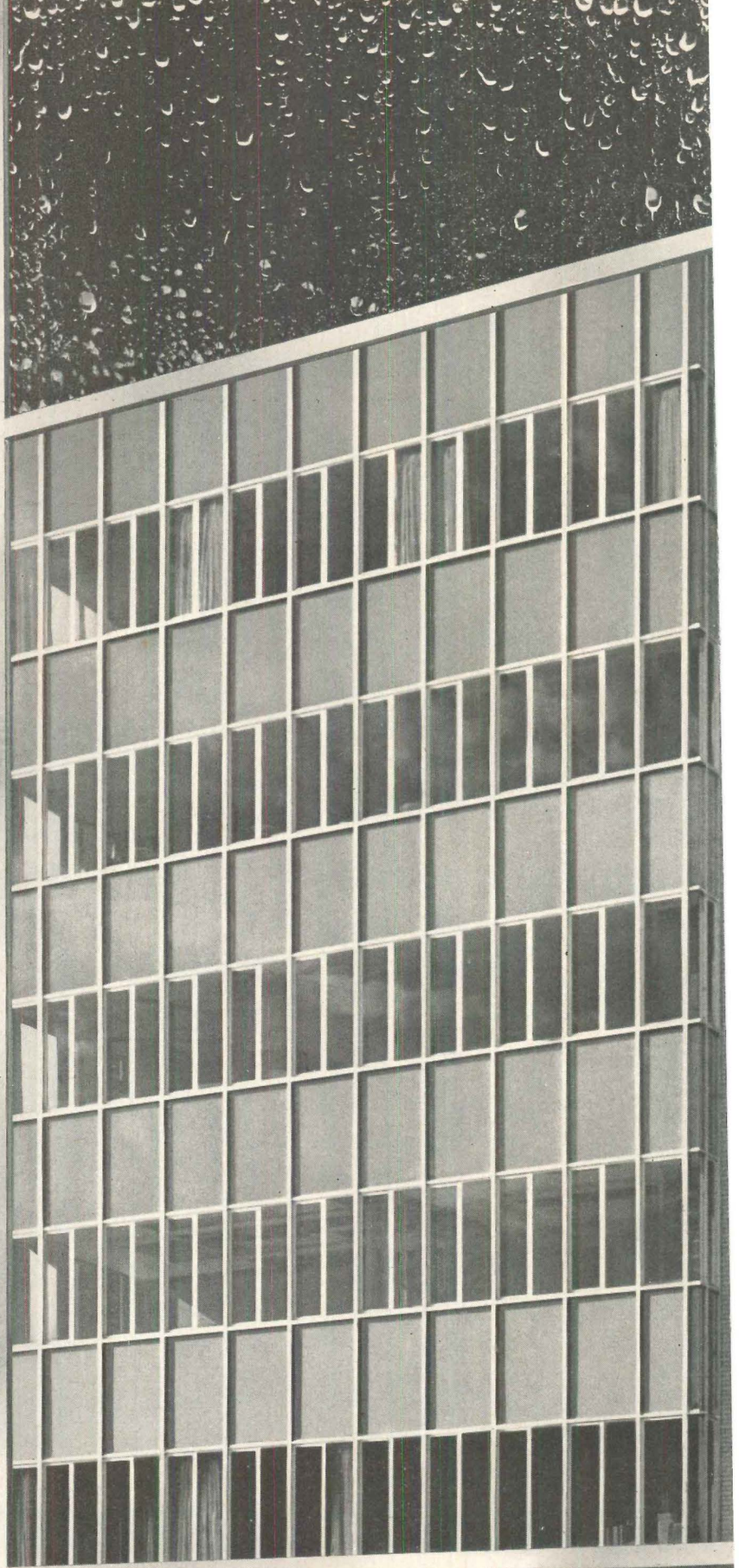
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Now fluorescents wear jackets to give better light in the cold

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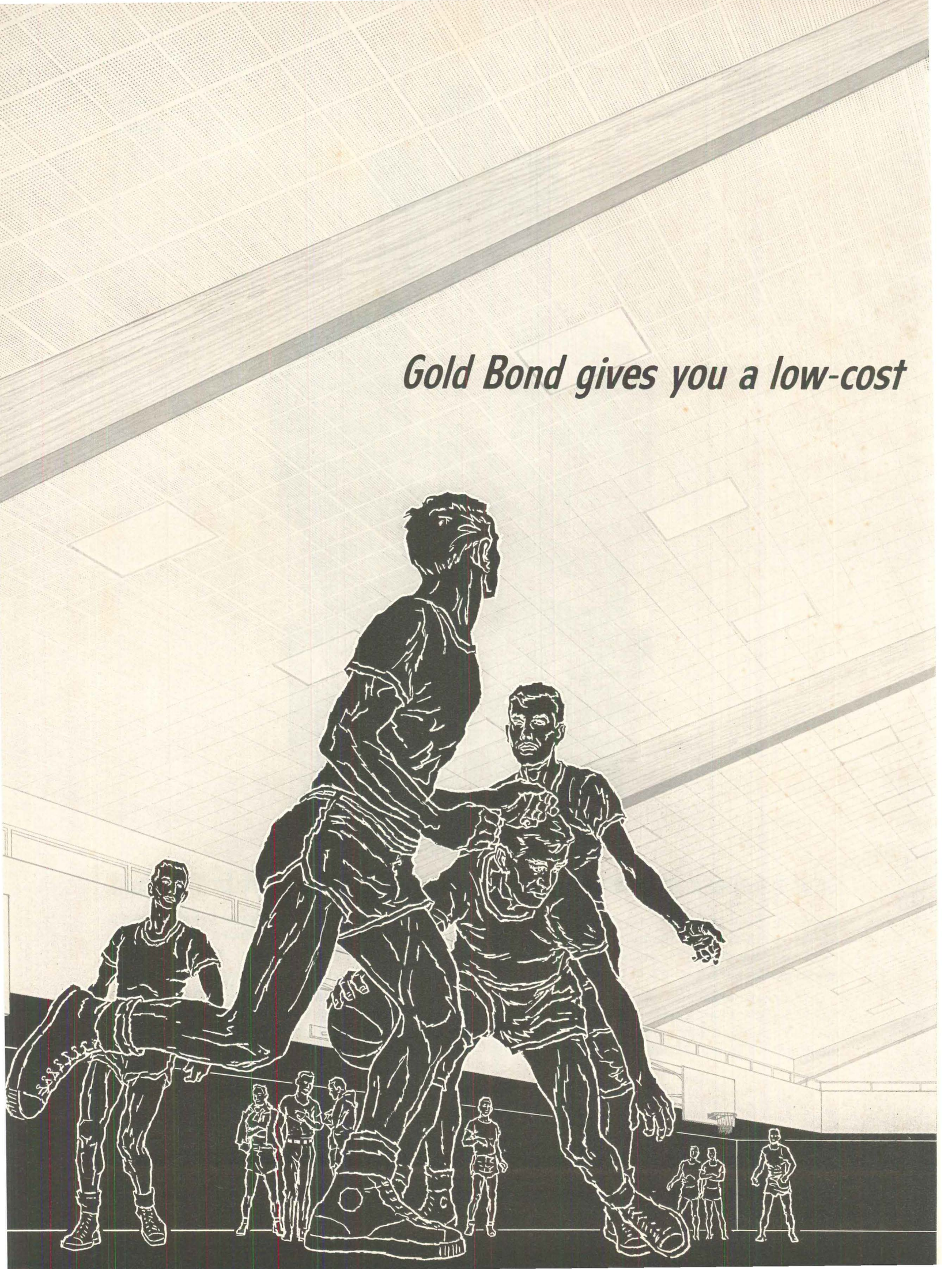
General Electric takes lamp leadership seriously. You can often get help in using light more profitably in many different ways by calling your Large Lamp distributor. Or, for help with temperature problems, write General Electric, Nela Park, Cleveland 12, Ohio.

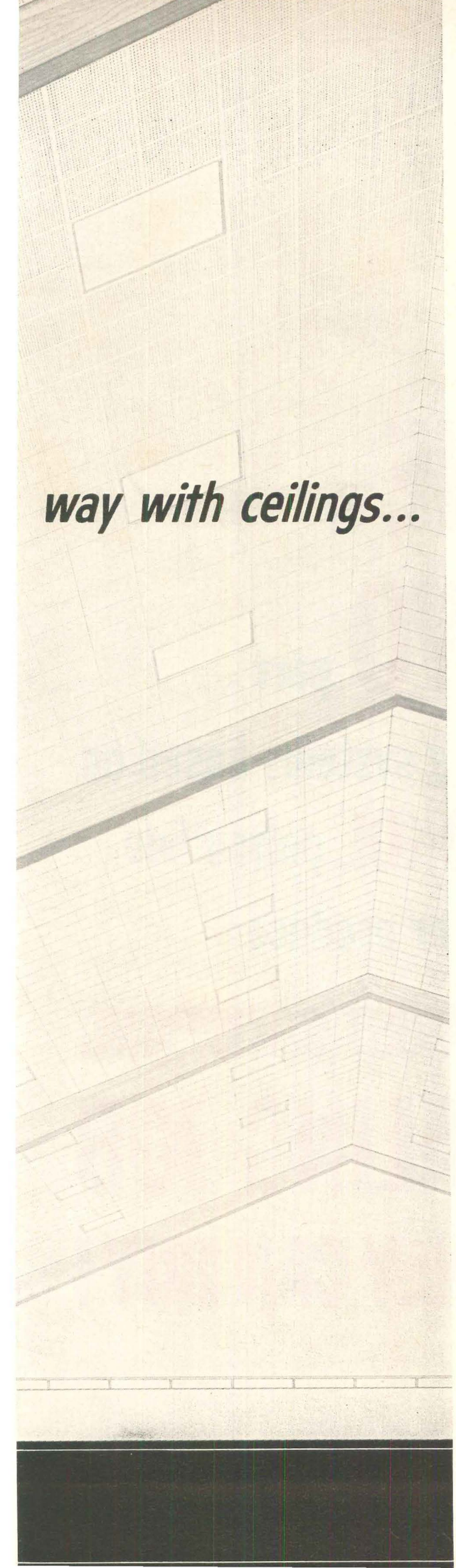
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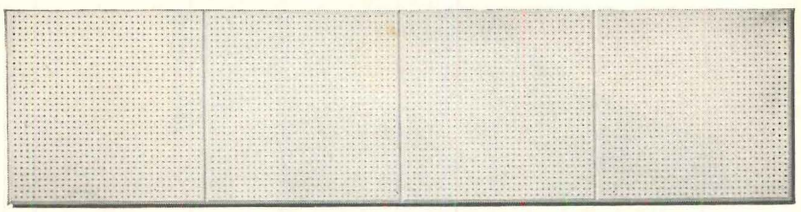
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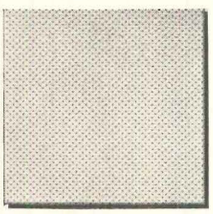
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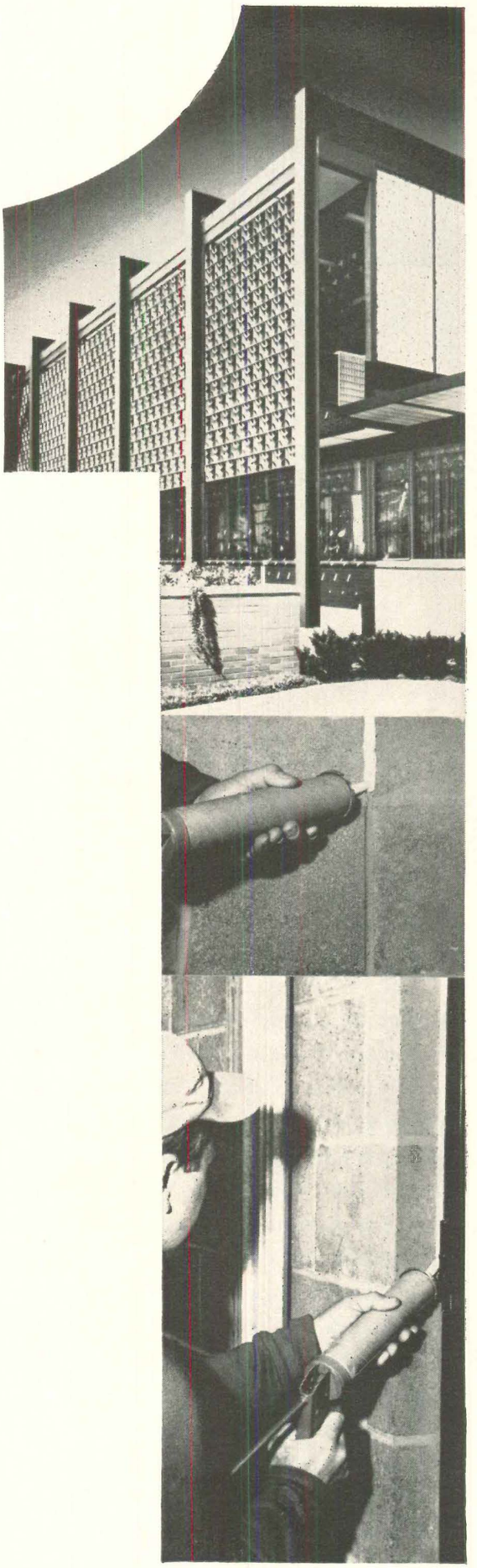




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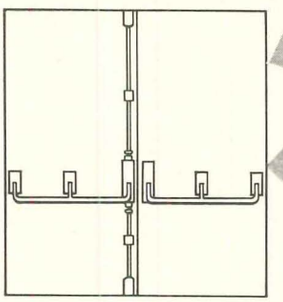
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ARCHITECTURAL FORUM published by TIME INC.

In praise of competitions . . .

The design competition for a new Boston City Hall (FORUM, June '62, "News") could be a turning point in American architecture. For a building of major symbolic importance in a great city, the architect was selected by a contest open to any registered architect in the U. S. Boston is to be congratulated on its boldness: this is the first open competition for a major municipal structure in almost 60 years.

The statistics are interesting. There were 256 contestants, more than 40 of them architects of established reputation. The eight finalists, however, were men generally young and relatively unknown. Of 34 other designs chosen for public exhibit less than ten were by well-known firms. In judging the winning design, by Kallmann, McKinnell and Knowles, a distinguished jury was "unanimously delighted to see its best hopes . . . so brilliantly fulfilled."

The Boston competition should be a lesson to all interested in the advancement of architecture. The lesson is that there exists in America a tremendous reservoir of untapped architectural talent; the only way of tapping it is by open, public competition.

The usual arguments against competitions are: 1) *That they do not guarantee a good result*—but does any method of selection guarantee results? 2) *That competitions are wasteful*—but since architectural design is a creative process, no serious architect feels he wastes time in designing an important work, whether it be built or not. 3) *That inexperienced architects may win, and that design is only part of the total architectural service*—the winner, if inexperienced, can be required to associate with an acceptable experienced architect. And 4), *that competitions are expensive*—but for something less than $60,000 Boston secured preliminary designs that surely would have cost half a million dollars had they been commissioned in the normal way.

If only 10 per cent of the buildings using government funds were selected by competition, would this not inspire at least five great buildings a year that would not otherwise have been created?

If this is even a possibility, I would propose that 10 percent of all federal buildings costing over $5 million (except military structures) have their architects selected by open, national competitions, and similar arrangements be made for state and municipal work.

The major arguments for a competition are obvious: 1) It is the democratic way of selection. 2) Good, even great, buildings have been so selected. 3) Most of Europe selects architects by competition and the results are on the whole superior.

There is yet another argument: neither the League of Nations designed by Le Corbusier nor the Chicago Tribune design by Eliel Saarinen won their competitions—but they surely were prototypes for a whole generation of architects. Perhaps the ultimate value of the public competition is not the obvious one of securing a good building, but, rather, the creation of an atmosphere of excellence, and the occasional prophetic vision given by a great design.—*A guest editorial by Percival Goodman, FAIA.*



New buildings, new problems,



GEORGE CSERNA

new solutions

Architecture for the jet age



THE CONFUSION IN AIRPORT PLANNING

BY DONALD CANTY



GEORGE CSERNA

The disgruntled gentleman seen at left is, of course, the Forgotten Man of the Jet Age: the airline passenger. He is the victim of a series of circumstances—most of them unwittingly created by those who, today, shape our airports. These people spend a good deal of time fighting each other. The cast of characters includes the following:

▸ The airlines, carriers of passengers and cargo, who find their business booming but their profits all but disappearing as they pay off a $4 billion investment in equipment and facilities.

▸ Those who fly private planes for fun and profit, but are finding fewer fields where they are welcome. There are presently 77,000 private planes to 1,000 carrier aircraft. The manager of a big metropolitan airport recently characterized private flyers as "sports minded, like motorcycle riders." The private flyers do not cultivate this image.

▸ The airport managers themselves, in major cities agents of municipal government or of a special authority, who like to blame the airport's many problems on others (often with some justice). Few of them "have available in any real depth the wide range of talent and experience needed to cope with the complexities of airport location, planning, and construction," according to Karl M. Ruppenthal, an outspoken jet pilot who heads Stanford University's transportation management program.

▸ Federal aviation officials, who regulate and subsidize both airlines and airports. They are curiously split between the Civil Aeronautics Board, which certificates routes and carriers, and the Federal Aviation Agency, which administers the myriad programs set up to handle the traffic thus created. "There hasn't been any real coordination between these functions for 20 years," says Tom Burnard, executive director of the Airport Operators Council.

▸ The community at large, ambivalent about airports, realizing their necessity but resenting the nuisance they can become. While air transportation plays "an obviously valuable role in the local economy," Planner John T. Howard of MIT has said, "the sheer size of airports . . . fragments the urban pattern."

▸ The airport's neighbor, peering anxiously upward as he hears the eerie screech of an arriving jet low overhead. He has read newspaper stories suggesting that the Supreme Court said you could sue airports if the noise bothered you.

▸ And last and generally least, our airline passenger, who may have driven for an hour through dense traffic to reach the airport and then walked nearly a mile to board his plane.



Karl Ruppenthal says that Stanford's biological laboratory gets its mice from New England via air freight—and that the mice make what is essentially a single journey, from portal to portal. "Unfortunately," Ruppenthal adds laconically, "things are not so well arranged for the airline passenger."

In fact, it is safe to say that no deep consideration is given the passenger until airport planning reaches the stage of designing a terminal. By then, of course, it is far too late. The big decisions that will affect his safety and convenience already have been made.

First problem: where to find the necessary space

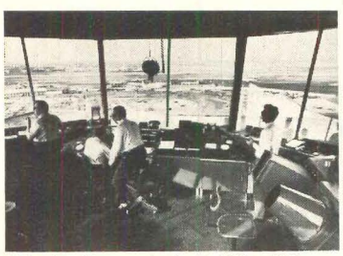
At once the most crucial and most difficult of these decisions is simply one of siting. This has grown to be the central problem of airport planning, touching on all of aviation's woes, involving all of the people listed above.

The search begins in the sky. "We're quickly running out of controllable air space," says Cole Morrow, director of FAA's recently established Airport Service. Air traffic is getting heavier and more concentrated (last year 23 airports handled 67 per cent of it). Jets are bigger and faster, and need more room to move around in.

But the key word is "controllable." FAA's air traffic control network has lagged far behind both the increase in volume and the developments in aircraft characteristics. Ruppenthal put it this way: "When we got the DC-6, our airways traffic control system was reasonably adequate for the Ford Trimotor and almost ready for the DC-3. Now that jets have been in operation well over two years, the system is about ready to accommodate the DC-7."

Morrow agrees that the system "needs further development to increase its capacity. It is suffering from neglect. In the early 1950s our budget for research on air traffic control was cut to zero. Last year we had $60 million to work with." One of FAA's new research tools is a handy "air traffic simulator." Models of present traffic over a prospective airport site are fed in, actual control devices are put to use, and the simulator gives a precise reading on how well the airways can bear the additional traffic.

Among FAA's traffic control headaches is the hazardous mix of



JOE SCHERSCHEL—LIFE

Air traffic control at Idlewild

big and little aircraft at hub airports. Only recently did the agency require that private airplanes have two-way radios, and the Sunday flyers are still complaining.

By no means all private planes are used by motorcyclists of the sky, of course. The company plane is becoming an increasingly important vehicle of commerce. "General aviation," the industry's term for noncarrier, nonmilitary flying, needs an estimated 150 more airports than are now available. Instead the number is rapidly dwindling, due to increased land values —this despite the demonstrable fact that airports for business planes are essential if a small city is to attract industry.

No electronic simulator is available to plot the economic, political, and human factors which complicate the search for land.

Jet runways are now being built from 10,000- to 12,000-feet long. Requirements of wind direction, traffic control patterns, flight procedures, etc., often result in an inescapably wasteful and untidy use of land. Add the accessories, such as terminals and hangars, ring the runways with approach, takeoff, and buffer zones. It all means that few major airports will be built in the future on sites much under 10 or even 15 square miles.

Airports in no man's land?

Few local agencies can afford such quantities of land at close-in prices, even with federal aid. So the airports move farther and farther from the people they are built to serve. Someone once figured that an air trip from the center of Washington to the center of New York is made at an average speed of 80 miles per hour. "We face the bizarre prospect of being able to cross this country in an hour and a half, but having to spend twice that time getting to and from the airports," said Charles J. Zwick, head of logistics for the Rand Corporation.

Zwick mentions three solutions frequently offered. The first is construction of more freeways and limited-access highways. "This appeals to the airport operators, who are quite aware that parking fees create considerable revenue." Still, he is sure private cars will continue to carry much of the traffic.

The second possible solution, according to Zwick, is increased use of helicopters and other V/STOL (vertical or steep takeoff and landing) aircraft. But he predicted that "helicopter service will expand rapidly, have a very fast rate of growth, and end up hauling a small percentage of the total."

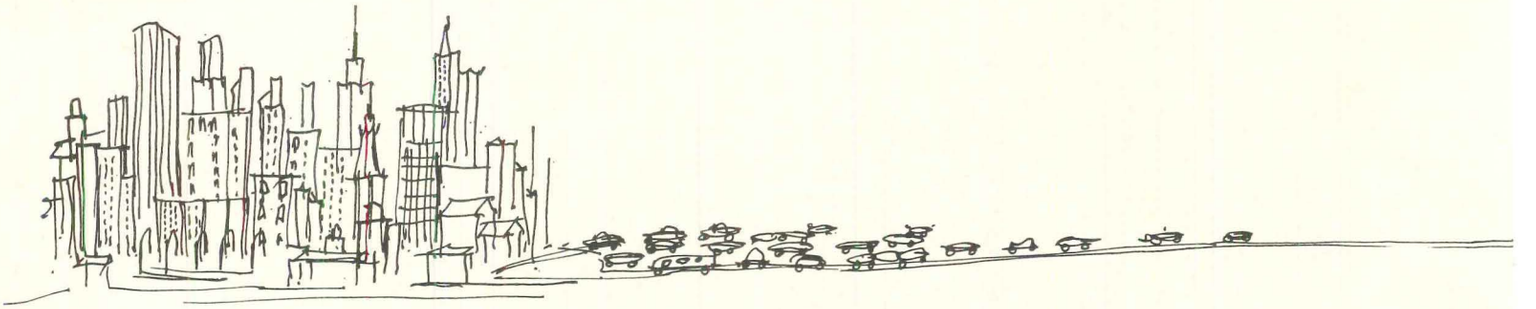
The third possibility is rapid transit. However, "only one person out of three using our airports comes from or wants to go to the central business district," Zwick points out; and he adds that transit authorities have enough trouble providing facilities to places where people *do* want to go. Still, he sees use of mass transit by many air travelers eventually.

If there is little agreement about airport access, Zwick said, there is even less being done about it. Research and development work on helicopters and even more otherworldly V/STOL aircraft is underway both in FAA (as "Project Hummingbird") and the Defense Department. But Zwick's pessimism seems justified. At present the helicopter lines pay their bills with three dollars from federal subsidies to every one from fares —and the government is getting restive about providing such handsome assistance.

The aviation industry badly wants to get at the 90 per cent of the population that does not regularly buy its service. The increasing difficulties of getting to the airport are a strong deterrent. Yet authority over ground transportation rests elsewhere, and the people with whom it rests have other problems. Someday perhaps there will be close coordination between air and ground transportation systems. Someday, in fact, some city may have a ground transportation system which is itself coordinated.

Enter Mr. Thomas N. Griggs

Once in a while it comes to pass that a local airport authority finds an ideal site—a vast quantity of land beneath open airways, reasonably near the city, at a price it can afford—and is prevented from putting it to use. New York has experienced this frustration, and Los Angeles may



too in the near future. When such a thing happens, listen for the whine of a jet engine in the background. Aircraft noise has branded the airport a bad neighbor.

In March the U.S. Supreme Court decided that one Thomas N. Griggs had $12,600 coming from Allegheny County, Pa., which operates the Greater Pittsburgh Airport. Mr. Griggs lived 3,250 feet from the end of a runway, but the approach zone came to within 11.36 feet of his chimney. Mr. Griggs had to move away because of the noise.



Noise hater Thomas N. Griggs

The Supreme Court ruled that the airport had taken an easement on the air above the house without due compensation to Mr. Griggs. Said Justice William O. Douglas in the majority opinion (the minority agreed there had been damage, but felt the government should be held responsible), "the use of land presupposes the use of some of the air space above it. Otherwise no home could be built, no tree planted, no fence constructed, no chimney erected."

With the articulate exception of the airport operators, the aviation industry agrees that the Griggs Decision created no new precedent save one: it pointed the finger of legal responsibility for the nuisance of aircraft noise directly at the airport. The airlines, their pilots, and the aircraft manufacturers have set up an organization called the National Aircraft Noise Abatement Council. "Subjacent property owners have long had legal recourse for invasion of their rights," insists General Jack R. Cram, the ex-Marine hero-pilot who is the Council's president. "The Griggs Decision applied only to a very narrow set of undisputed facts."

Nevertheless, the general and his associates remain nervous about the misleading newspaper publicity which the case has generated. It appears that upwards of 4,500 suits have been either filed or threatened. "Few of these cases meet the Griggs standards," Cram says. "Many will never actually reach the courts, and those that do may take 10 years to try." And he adds that some unscrupulous attorneys have taken to chasing jets instead of ambulances.

Tom Burnard of the Airport Operators Council agrees that the Griggs Case gives no grounds for panic, although 4,500 cases is more flood than trickle. However, he admits that "the Griggs Case gives no assurance that the airlines can't be sued too." The airport operators' case goes something like this: The Supreme Court's first ruling on the airport as a nuisance came nearly 20 years ago in the Causby Case, involving low-level flight of military aircraft over a chicken farm, and the government has since paid off regularly for damage from military flights. The Causby Decision also ruled that Congress has placed navigable air space in the public domain. The Federal Aviation Act of 1958, in turn, placed takeoff and approach zones in the category of navigable air space. If damage results from use of an approach zone, therefore, Congress should take care of the bill.

The Airport Operators Council is preparing draft legislation to make this view of the situation law. But the Council received little comfort from Mike Monroney, the Senate's reigning aviation expert, when he appeared at its spring conference. He told the Council not to expect any new legislation from Congress.

Both Monroney and the Court seem to feel that the airport must buy enough land or easements overhead to prevent aircraft noise from becoming an unbearable—and legally actionable—nuisance. But the airport operators want to know how much is enough. They also want to know where the money is coming from. "Since the beginning airport sponsors have gotten federal aid for fee title or air rights establishing clear zones beyond the ends of runways," Burnard says. "But these have been solely for protection of the aircraft fom obstructions. The Griggs Decision speaks as if we must create clear zones for protection of the people on the ground from noise. Such easements might be a lot harder to get."

Aviation people are correct in pointing out the limitations of the Griggs Case, but there is no doubt that it has pushed the noise problem to the fore of their own and the public's consciousness. They are plainly worried.

Who belongs next door?

FAA's current planning philosophy, according to the agency's ranking noise specialist, C. H. Williams, is based on "compatibility of land use"—zoning houses away from airports. "Usually the airport is there first and the houses move in around it. Any time that happens you have trouble. Actually, there's a great demand for industrial and commercial land around many airports."

General Cram concurs. "On the east side of Los Angeles airport," he says, "houses are built solid under the approaches. Two years ago this land was worth $80,000 an acre and now it's up to $130,000. Land values are almost to the point where it would make sense to tear the houses down and use the sites for light industry. Until we can effect this kind of conversion of land use, we will have a noise problem."

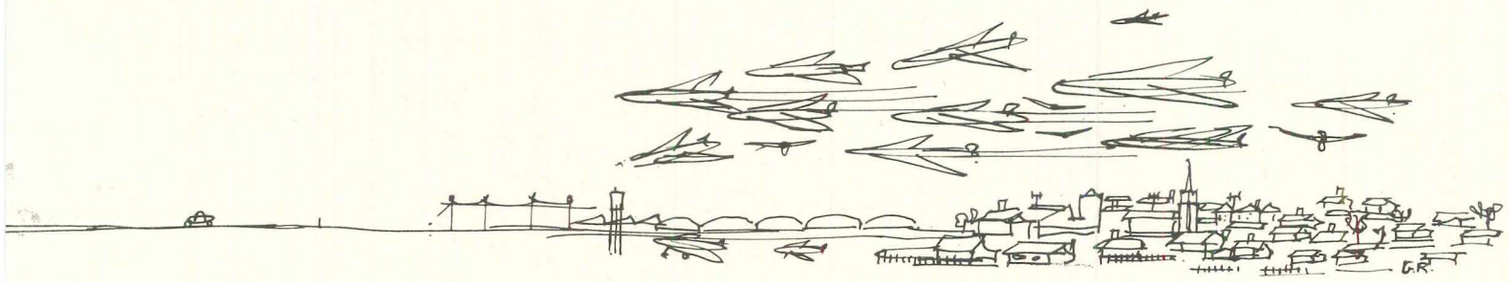
Both FHA and VA, incidentally, are lending a helping hand in the quest for compatibility. They will no longer insure mortgages for new houses butted up against runways. However, they will still approve loans for existing houses in critical noise zones if the houses have kept their market value.

The airport operators enter a strong dissent on the effectiveness of the land-use approach. "To begin with," says Burnard, "it's impossible to zone people out of their houses. Sure, you could buy the property, but who's going to provide the bankroll? The only way it might be done is through some form of urban renewal."

Burnard's solution is to reduce aircraft noise. "It has to be stopped at the source," he says flatly. "There simply hasn't been the all-out effort that is needed. The fanjet helped—but the fanjet was developed for commercial, competitive reasons. Reduction of noise was a by-product.

"What's the motivation for the manufacturers if there's no profit in noise control for its own sake? It is up to the FAA and Congress. The attitude of both so far has been to give the industry every opportunity to find its own salvation. It may take more lawsuits to bring on federal action."

The Griggs house, meanwhile, which started all the present fuss, has become St. Phillips Episcopal



Church. "I used to live in the second floor of the building with my family," Reverend Donald Clawson, the rector, told an interviewer, "and it was a bit noisy at times. But I don't think we're bothered too much by planes."

Example of "real planning"

"Unfortunately," lamented pilot-academician Ruppenthal, "there is no single culprit responsible for this sad state of affairs. Our entire lack of real airport planning has been made possible because hundreds of government agencies have some authority to deal with airport problems, while not one of them enjoys overall responsibility."

This being the case, there is good reason to look to Dulles International Airport by the late Eero Saarinen, which is nearing the final throes of construction in the rolling Virginia countryside near Washington. It has set an example of "real airport planning." It is being built and will be operated by FAA. Dulles gives the agency's airport experts a chance to practice what they preach.

Washington is presently served by two major airports. Jet traffic comes to Baltimore's Friendship, some 33 miles and 50 to 80 minutes away. Piston planes—clouds of them—use Washington National, 15 minutes across the Potomac from the Mayflower Hotel, one of the nation's busiest and most convenient fields. (In part, the convenience is a geographical accident. Planes come in and out along the Potomac instead of over the city's roofs. "If it weren't for the river," says FAA's C. H. Williams, "we'd have revolution.")

When it came time for finding a site for a major new Washington airport, the planners looked covetously at Andrews Air Force Base, close in and big enough for jet runways. But the Air Force was not inclined to sell or trade Andrews, so in 1951 they settled on Burke, Virginia, and began buying land. Burke fit well into air traffic patterns and had a low population density. But it turned out that some of the population was close to Senator Harry Byrd, and their protests stalled any progress beyond condemnation and purchase of the first 1,000 acres.

The project came to a stop until 1957, when funds for construction of the new airport were tucked into a foreign-aid bill. But senatorial friends of Harry Byrd read the small print, exploded, and threatened to block the entire bill in committee. Finally they agreed to let it go if site selection were left to Elwood P. Quesada, then a special White House assistant for aviation and later FAA administrator under Eisenhower.

Quesada had an engineering report made on the best potential sites, and held public hearings on the highest-rated four: Burke, Friendship, and the small Virginia towns of Chantilly and Pender. In the end the 1,000 acres owned by the government at Burke were auctioned off (part at a substantial profit) and teams of land buyers moved into Chantilly. The choice doomed Friendship to join the nation's growing number of ghost airports—Fort Worth, Oakland, Chicago's once-booming Midway, Burbank in Los Angeles—all bypassed, for one reason or another, by the big jet carriers.

In all, 9,800 acres—nearly 15 square miles—were bought for Dulles at a cost of $5 million. The vast area includes generous buffer zones. Strips of forest were left to insulate each runway, and 1,500,000 new trees were planted. Negotiations were undertaken with Loudoun and Fairfax counties to achieve compatible zoning regulations past the buffers—a land boom had begun even before the final site selection was announced. The negotiations are still going on.

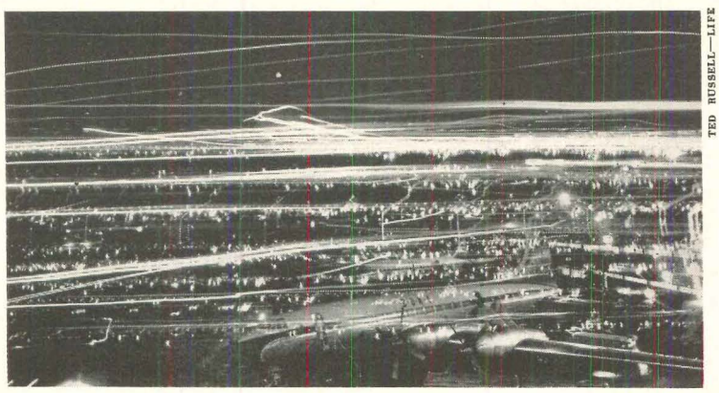
The airport will be 27 miles from Washington, almost as far as Friendship. Quesada's answer to this unfortunate circumstance was a limited-access highway. When Virginia politicians assailed the idea and proposed that the highway be opened to general traffic, he offered to sell them the right of way for a dollar and let them build the road. Virginia didn't call his bluff.

Halaby not only inherited Quesada's concern for the highway, but got an idea one afternoon to protect it. He telephoned Interior Secretary Stuart Udall and Budget Director David Bell, arranged to pick them up in a helicopter, and showed them the road from the air. Before they landed he had arranged to convey it through Bell to Udall's Park Service, probably as a toll road. Virginia hasn't given up—there is a bill now in Congress to open the highway to general traffic—but chances are the road will be built as planned.

The limited-access highway will bring travelers from Washington to Dulles in 35 minutes when completed in 1968. Combined with helicopter service, it should make Dulles unusually easy to get to for an airport its size. If all goes well with Congress and the two counties, Dulles could become a landmark of overall airport planning as well as terminal design. Does this argue for a larger federal role in airport planning and operation?

Needed: a nationwide plan for a nationwide industry

"We need to develop a national system of airports, rather than an assorted collection of individual airports," says Cole Morrow of FAA. "In the past we've approached airport planning on the basis of local activity. But airports must serve each other's needs as well as their own. Right now it's as if the national highway system depended on independent decisions by all the cities and counties along the way. The first step toward a more efficient national airport system could be federal and state action involving the same kind of cooperation that exists now on highways. To achieve our goals requires direct federal action. We can no longer wait for local communities to take the initiative." For a sample of today's confusion, see the night view of Idlewild, below. END.



TED RUSSELL—LIFE



PHOTOS BY GEORGE CSERNA

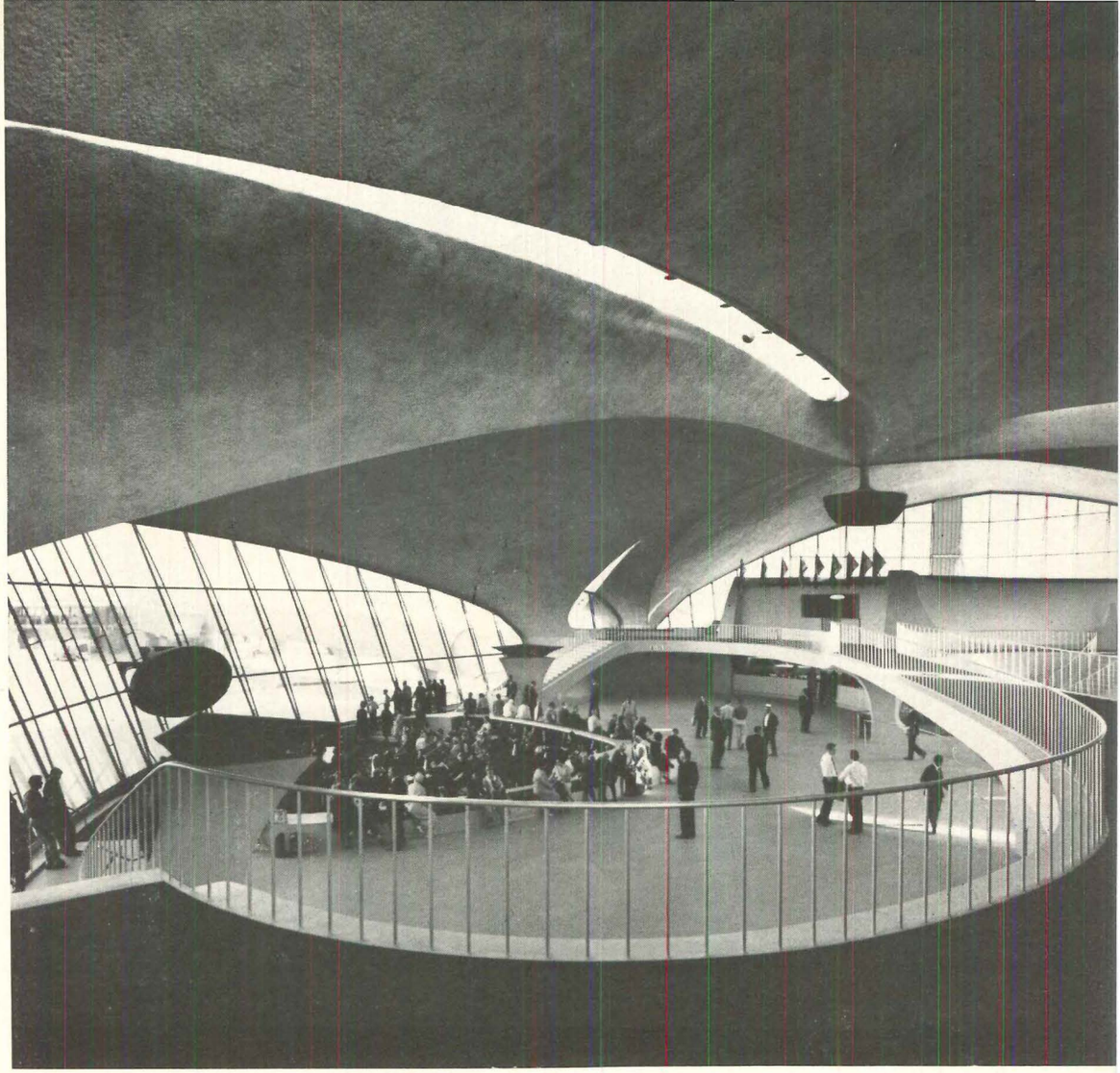
"I WANT TO CATCH THE EXCITEMENT OF THE TRIP"

So spoke the late Eero Saarinen of his design for Trans World Airlines' terminal at Idlewild, New York. And to thousands of architects and travelers, that design was famous long before it rose laboriously to spread its concrete wings.

Now that it is finished and in operation, TWA looks, from the air, more like a giant horseshoe crab than a bird in flight (see page 77). But from the ground, and inside, it is a stirring object, its structure swooping in high-speed curves all around, like an oversize Gaudi sculpture of the jet age.

The building represents some $15 million invested, some 11 million tons of concrete and steel carefully put in place. In the 4,900 acres of Idlewild, it is one of a great ring of competing structures, each inhabited by rival airlines seeking to woo travelers to their ticket counters with design: Idlewild, in fact, is the first airport where separate terminals have been built to the specifications of individual carriers, and the result is an architectural free-for-all.

There can be little doubt about who won. On these pages is an attempt in photographs to convey some of the spatial and sculptural sensations of this truly fantastic work.

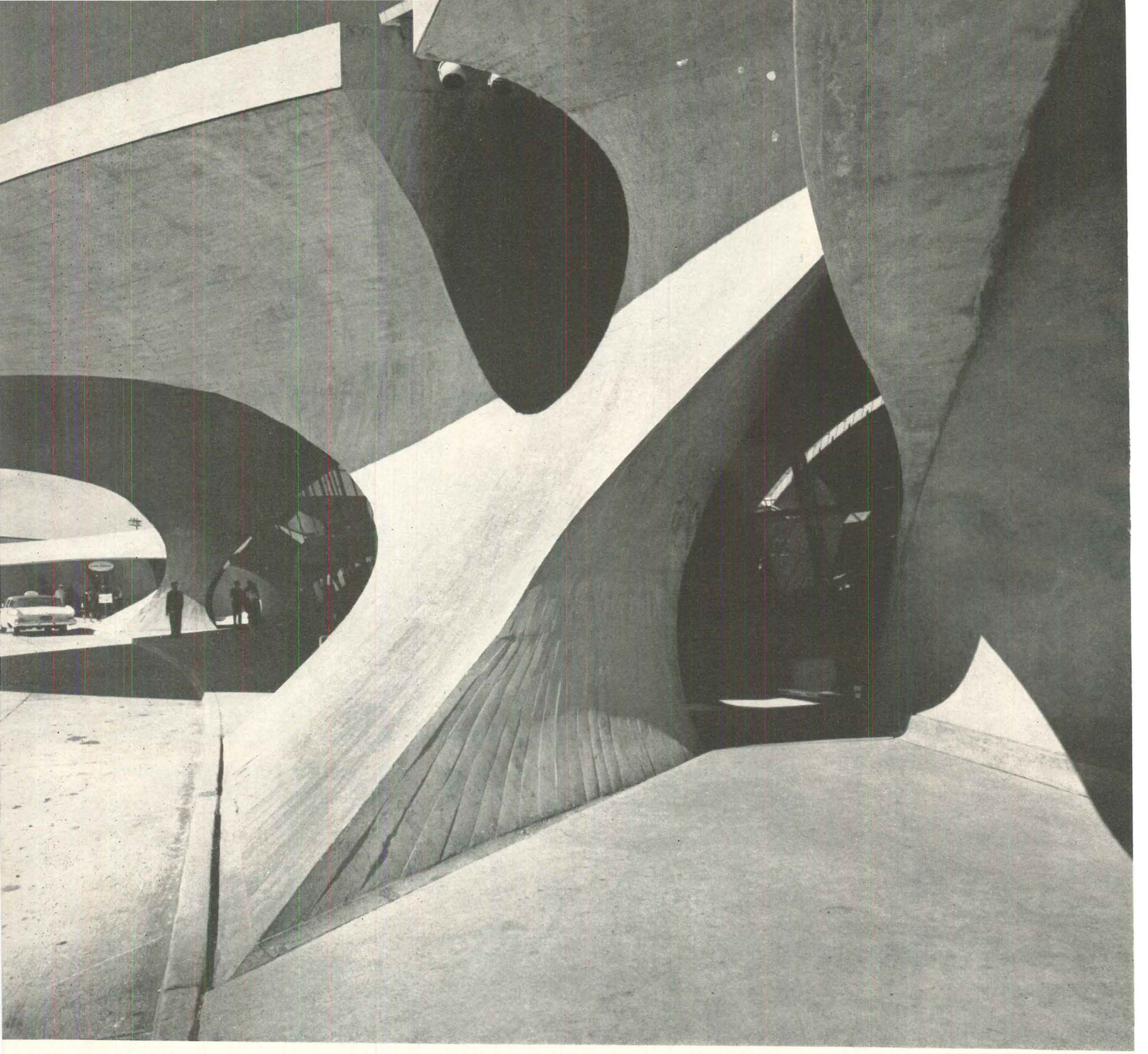


Along sheltered sidewalks (left) automobiles sweep into the grasp of the building to drop passengers.

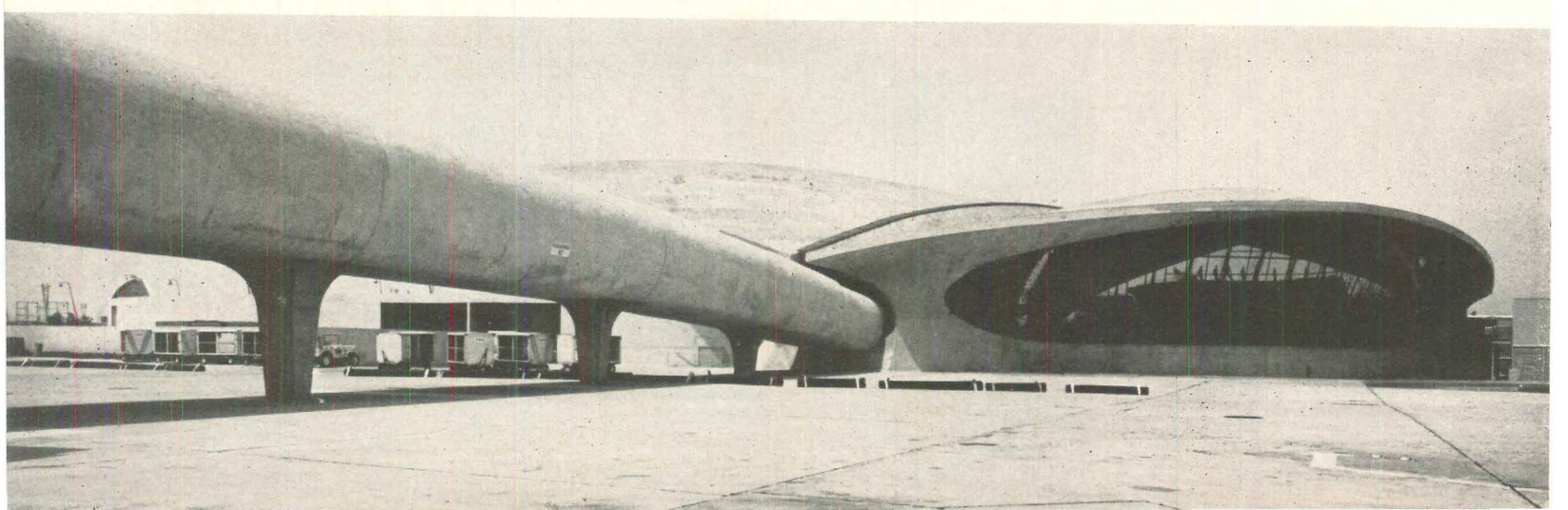
The waiting room, seen here from the mezzanine (right), is inset with what must be one of the largest conversation pits ever designed.



TWA's interior is a huge, serene space, but one seemingly in constant motion, as in the swift curves of the stairways seen at right.



PHOTOS BY GEORGE CSERNA



FACTS AND FIGURES

Trans World Airlines Terminal Building, New York International Airport. Architect: Eero Saarinen & Associates. Associate in charge: William H. Gardner. Engineers: Ammann & Whitney (structural); Jaros, Baum & Bolles (mechanical and electrical); Consultants: Bolt Beranek & Newman, Inc. (acoustical); Stanley McCandless (lighting). Restaurant interiors: Raymond Loewy/William Snaith, Inc. General Contractor: Grove Shepherd Wilson Kruge.
Construction cost: $14.8 million (including architects' and engineers' fees). Furnishings: $400,000 (excluding ticket counters, baggage carousel, and other built-in features). Financing: Bonds issued by Port of New York Authority (owner).



The concrete work of TWA is exquisite, even when formwork shows as on one of the massive supporting legs (left). The curves are adjusted with a sure hand.

A tubular concrete walkway more than 300 feet long leads from the terminal proper out to the planes. At left is the striking exterior; at right, the eerie "long walk."

PROBLEM NO. 1: PEOPLE, BAGGAGE AND PLANES

Four years ago, when the airlines began investing $2 billion in new jet planes, they found they were hit with a bill for another $2 billion just for revamping ground facilities.

For in order to handle the new planes, radical improvements had to be made in the ways that passengers, baggage, and information were funneled through airport terminal buildings. So far these improvements have taken the form of a patchwork of additions to well-established practices. The only fresh approach to terminal design problems came from an architect, the late Eero Saarinen, whose mobile-lounge concept has not been popular with the airlines.

Few building types have had their traffic patterns as carefully analyzed as the air terminal. The Federal Aviation Agency provides a well-researched guide for airport planners.* In it, the areas required for all key terminal building functions have been charted in terms of the expected peak-hour passenger traffic.

But the jet-powered plane, because of its larger size and greatly increased passenger capacity, has four distorting effects on the kind of airport plan that worked well in the past. First, the perimeter of the terminal building must be stretched out somehow to accommodate the jet's 200-foot-diameter parking circle. Second, peak-hour crowding at ticketing and baggage return counters is intensified. Third, there is the problem of providing passengers (and agents) with up-to-the-minute flight information in any part of the terminal. And, fourth, the moving of people through the terminal building to the plane, particularly in bad weather, has become more and more troublesome.

The growing fleet of jet planes with their hundred-plus passenger capacities has expanded these difficulties into urgent problems.

ARE MECHANICAL PORTERS SLOWING THINGS DOWN?

Even before commercial jet transports came into service, many airlines started investigations of mechanical devices designed to ease the flow of traffic through the terminal building. Their experience with rapidly changing aircraft designs since the end of the war made the airlines acutely aware of two key factors in the planning of their facilities. It became clear that effective servicing of the plane and its passengers is a total system in which every procedure and piece of equipment has to be carefully interrelated. Changing almost any factor in the system is bound to affect the efficiency of all the others. Then there is the overriding need for flexibility in the design of service procedures so that the widest range of aircraft types, present and future, can be accommodated.

A number of airlines, working independently of each other, are moving cautiously into the mechanization of their terminal facilities. The newest terminal buildings are becoming housings for a fantastic array of mechanical equipment designed to solve the problems that ingenious space planning cannot solve.

Rush-hour passengers experience their greatest frustration waiting on long, slow lines to have their tickets and baggage checked. Peak-hour traffic is normally limited to only two or three hours during the day. Adding enough manpower to handle rush crowds smoothly is an extremely expensive procedure. Two airlines have already installed mechanized baggage handling equipment of extreme sophistication.

One of these systems involves loading the baggage on wooden pallets which have a series of metal studs imbedded in their frame. Instead of tying tags to the baggage, the agent impresses a magnetic code message in these studs using a key console on his counter. On a signal from the agent, the pallet vanishes beneath the counter onto an elaborate system of tracks in the baggage handling room below. There, a monitoring device reads the coded message and shunts the pallet to its destined baggage cart.

Unfortunately, there have been reports that the first two installations of this system have often been slower than conventional muscle-powered baggage handling methods. Many mechanical "improvements" have had similar early histories. With further experience, the potential savings of time and manpower may well be realized.

Another hectic station in the journey through a crowded terminal is the baggage return counter. Here too, mechanization has been tried with some success. The most advanced of the mechanized return devices is the

TWA's carousel: bags pop up from below, circulate to owners



GEORGE LOSHNA

**Airport Terminal Buildings*, Federal Aviation Agency, September 1960. U.S. Government Printing Office, Washington 25, D.C. 55 cents.

"carousel" in Saarinen's new TWA building at Idlewild. This may not always bring baggage back faster than the nonmechanized method. However, it does eliminate the competitive jockeying for position that can make retrieving a piece of baggage an exhausting experience.

GETTING THE MESSAGE

Successful airline operation depends as much on effective communication of flight and reservation data as it does on flying planes. Until very recently, the development of new aircraft was far outstripping the development of ways to keep passengers informed. Massive increases in telephone equipment coupled with centralized computer-controlled reservation systems are improving communications outside the terminal building. Within, however, the old chalk-board information board, a relic of prewar aviation, is still a common sight.

Ideally, the same up-to-the-minute information should be clearly visible in all parts of the building. Closed-circuit television systems have been used to accomplish this. But the television repeaters are often cumbersome and difficult to read from a distance.

A new type of data-board system which uses regular printed letters and numbers has been installed in the past few months at the new Los Angeles, Chicago, and TWA Idlewild terminals. It is controlled by a central keyboard which is generally situated so that its operator has a commanding view of all gate activities. He can revise all the boards in the building instantly. In each space on the board there is a cartridge which holds a choice of thirty-nine separate characters which may include graphic symbols as well as letters and numbers in black and white or color.

EXIT THE FINGER?

Before Eero Saarinen designed the new Washington International Airport terminal it was assumed that the finger had to be an inevitable feature of the terminal building. These appendages always seemed to be the simplest way to expand the building to



Character-loaded cartridge

accommodate more or larger planes. Their form developed rapidly with the growth of air travel since the war. At first, the finger was no more than a covered walk out on the apron. Later, it was jacked up to a second level so that the ground would be free for service vehicles. Finally, passenger lounges were added at each gate. All the while, finger lengths were growing until today, mile-long walks are possible in transferring from one plane to another.

It seems to defy good sense to provide increasingly luxurious conditions inside the finger only to turn passengers out into the weather when boarding their plane. The airlines have been concerned about this most awkward situation and for many years have studied countless proposals for devices that bridge the gap between the building and the aircraft. As recently as 1959 they finally settled on one which works: the telescopic passenger corridor known to some as the "jetway."

These $60,000 gangplanks have certainly eliminated one long-standing source of discomfort to passengers. They have not eliminated long walks within the terminal and necessitate costly taxiing and delicate maneuvering of the giant jet planes. In addition, it is well-nigh impossible to find a satisfactory architectural solution for the jetway, an appendage on the gate lounge which is an appendage on the finger which is in turn an appendage on the terminal building proper.

The mobile lounge is another solution; if it is a success at the new Washington airport, it will probably revolutionize air terminal design. Aircraft can be parked a mile or so away from the terminal building for convenient ser-

O'Hare International Airport, below, (C. F. Murphy Assoc., chief architects) has fingers to get passengers to planes; so does TWA at Idlewild.

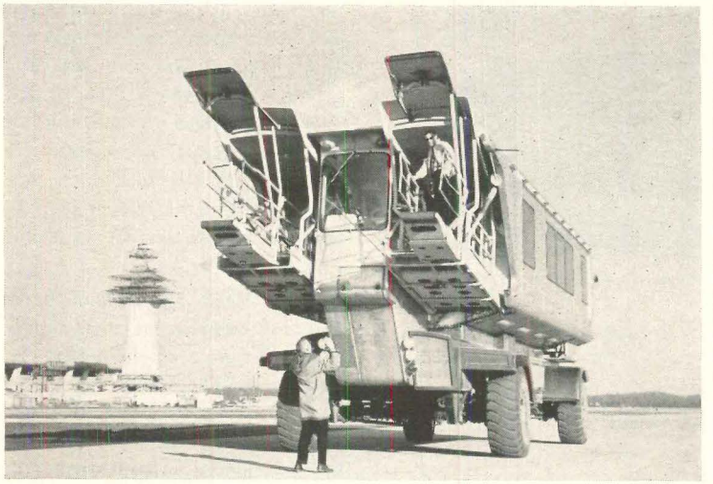


CHICAGO AERIAL SURVEY

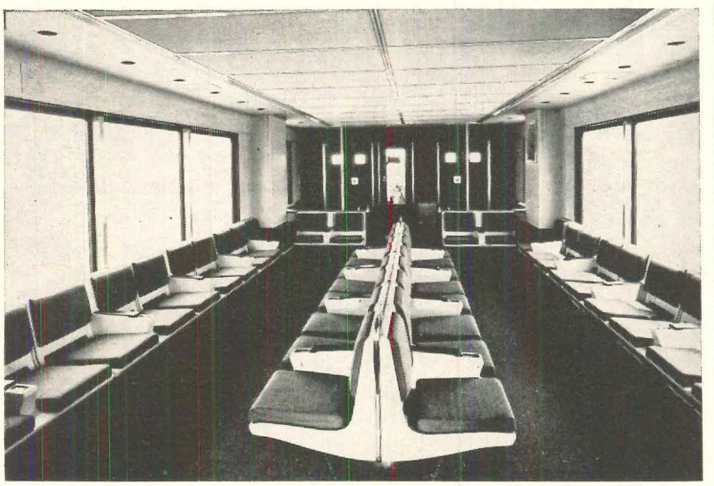


COURTESY THE PORT OF NEW YORK AUTHORITY

DAN PAGE



COURTESY FEDERAL AVIATION AGENCY



Planes will load from mobile lounges at new Washington International

vicing. The mobile lounge is something like the usual gate lounge set on wheels. One end connects to the main terminal building just a few steps away from the ticket counters. When it is driven out to the plane, the other end connects with the plane's doorway by means of cantilevered walkways.

The airlines themselves are still not convinced that the mobile lounge will improve their operations. They are dismayed by the high cost of the first 20 units ordered for Washington ($232,733 each). Neither do they like to lengthen scheduled flight times by 10 or 15 minutes because they must list in their timetables the time the lounge door rather than the plane door is closed. Still, competition among the airlines has always meant that no measure that really improves passenger comfort can long be ignored.

PROBLEM NO. 2: NOISE

When the commercial jets arrived on the scene just under four years ago, they brought with them the quietest ride ever experienced by air travelers. But while the passengers were snoozing overhead, people at the airports and in surrounding communities were being subjected to a new and rather enervating sound.

Jet engines make a very special kind of noise. And everyone concerned with jet noise—e. g. attorneys, insurance representatives, engine and plane manufacturers, civic officials, airport and airline managers, architects, acoustical engineers, as well as the ordinary citizen who happens to live near the airport—has been struggling to come to terms with this enormous new sound.

Actually, the overall sound pressure generated by a jet engine is about the same as that created by the familiar piston aircraft engine. In the early days of the jet engine, measurements of overall sound pressure made on an ordinary sound-level meter led some to believe that jet aviation would not create any new noise problems. Protests from people living near military jet bases soon shattered this illusion. The situation underscored a fundamental of acoustics: the human ear does not respond in the same way to all frequencies of sound. People are much more disturbed by high-pitched sounds than by low-pitched sounds with the same sound-pressure level. The jet engine is rich in higher frequency noise (see graph).

MORE POWER: WILL IT BRING TROUBLE OR SOLACE?

The old piston plane made a racket because of the explosions and vibrations within the engine itself. This kind of noise, and particularly the higher frequency portion of it, could be suppressed by wrapping the engine with a sound-resistant casing. Most of the objectionable noise from a jet engine is created by the high-velocity stream of air behind the engine which gives the jet its thrust. It shears through the relatively quiet air around it and creates an ear-shattering sound. The newest fan-jet engines obtain almost half again as much thrust as the earlier models by moving more air through the engine at lower velocities. This cuts down the noise created by the engine exhaust with no loss in efficiency. On present jet planes, the more powerful fan-jet engines make a steeper take-off climb possible. As distance is the best protection a community near the runway has against airplane noise, the steeper climb can make life a lot more tolerable on the ground. If the aircraft manufacturers continue to improve the power-to-weight ratio and thus the rate of climb, it will be the most direct solution to the community noise problem.

There is a basic conflict of interest between the people who are responsible for operating the airlines efficiently and the people

who are unlucky enough to live near the approaches to an airfield. Almost every measure which can effectively reduce aircraft noise in the community also introduces more complicated and expensive landing and take-off procedures for the plane. Before any significant progress could be made toward resolving this conflict, a manageable method for accurately measuring the annoyance value of aircraft sounds had to be worked out.

The pioneering work on such a method was completed in 1959 by Karl D. Kryter of Bolt, Beranek & Newman, acoustical consultants. By testing the comparative effects of a series of tape-recorded plane sounds on subjects under controlled laboratory conditions, he was able to devise a new scale of measurement which was called the perceived noise decibel (PNdb). Finally, a simple, single-number index was available that would indicate not how loud but just how disturbing any given noise would be.

Now that a satisfactory measure of annoyance from aircraft has been established, the serious problem of setting acceptable limits for this kind of noise still faces the community. The Port of New York Authority, which sponsored Bolt, Beranek & Newman's work, has decided to limit the PNdb level around its New York terminals to 112. This number is characteristic of the annoyance experienced by New Yorkers living near airport runways before the jets.

Each community faced with the problem of disturbing aircraft noise will have to hammer out its own particular compromise between economical airport operation and peace and quiet. This can now be done in terms of comprehensible PNdb rating. Further improvements in engine design, runway design, and timely zoning of the land surrounding new airports may mean that levels even lower than New York's 112 PNdb may be realistic.

GIVE WALLS THE AIR

Noise levels at the airport are generally far higher than they are in the surrounding communities. Yet, with careful engineering analysis, the noise problem inside the terminal and at airport motels and other auxiliary buildings can be solved.

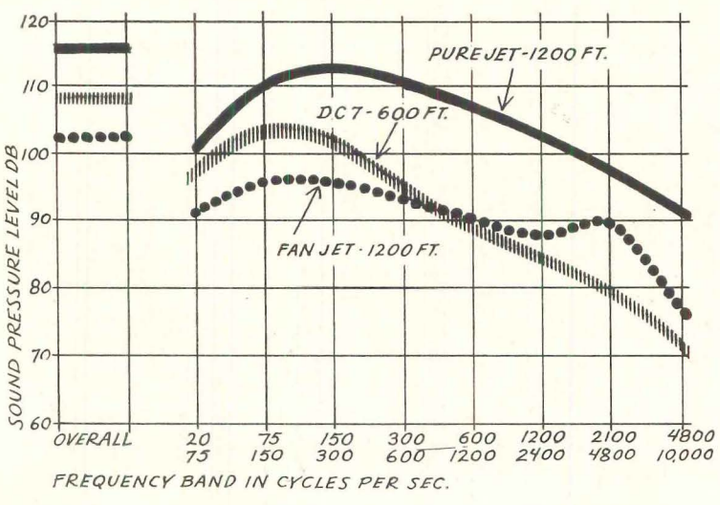
Unlike homes near the airport, airport buildings themselves can usually be built in a way that will prevent noise from interfering with the activities inside. First of all, it is an accepted practice today to fully air condition such buildings. Windows can be kept shut tight all the time, a tremendous advantage since any opening to the outside, even a small one, would make conversation impossible whenever a plane goes past. The budget for terminal buildings should also permit the architect to detail a far more substantial envelope for his building than for any other type of building away from the airport.

Not every part of the terminal building requires the same degree of quiet. Each area can be assigned its own noise criteria (NC) curve. These are weighted to compensate for the way the human ear reacts to sounds at different frequencies and make it possible to use a single-number criteria for each area.

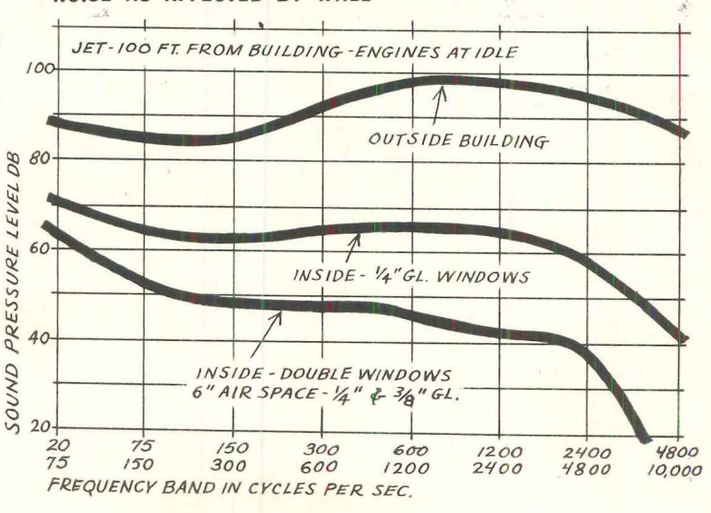
When BB&N did the acoustical work on the new Tulsa terminal, they suspected that the noise criteria were being chosen too high for comfort. There is a natural urge for an airport planner to do this since the higher the NC chosen, the simpler and less costly become the details of the building envelope. The acoustical engineers played tape recordings of airplane noise as it would sound inside the proposed building at the chosen noise criteria levels, and, consequently, they were lowered.

The first step in controlling noise within airport buildings is careful siting. The sound from jet engines is highly directional. The brunt of the noise can often be avoided by simply locating the building properly. For really first-rate sound control, double glazing set in resilient material is a must. Walls should be as massive and tightly sealed as possible. An internal air space really pays off in sound reduction for walls as well as windows. END

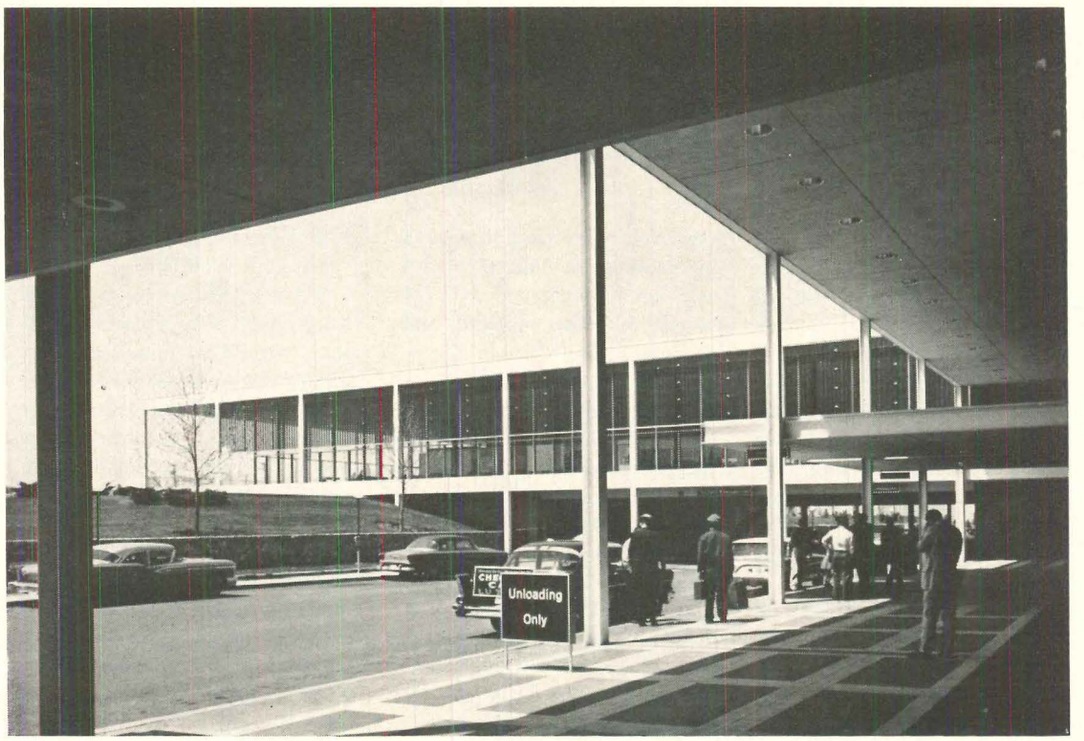
SOUND PORTRAIT OF PLANE ROAR



NOISE AS AFFECTED BY WALL



NEW AIRPORT DESIGN, IN THE U.S. AND ABROAD



BEN NEWBT

TULSA'S NEW TERMINAL is a simply but elegantly framed structure, made of steel, with precast concrete wall panels which wear an exposed aggregate of dark-green granite. The architects, Murray-Jones-Murray, took care to double glaze transparent walls facing the jet runways. A landscaped area, with pool and fountains (by Sasaki, Walker and Associates, Inc., landscape consultants) was placed on the highway side of the building, away from airplane noise. Waiting space and other passenger conveniences were pulled out of the circulation space to be related closely to this landscaped area. For planes, there are 15 gate positions, with expansion to 23 anticipated during the next ten years. The terminal building cost $4.3 million excluding furniture and landscaping, $18.64 per square foot. General contractor: W. R. Grimshaw Co.

JULIUS SHULMAN



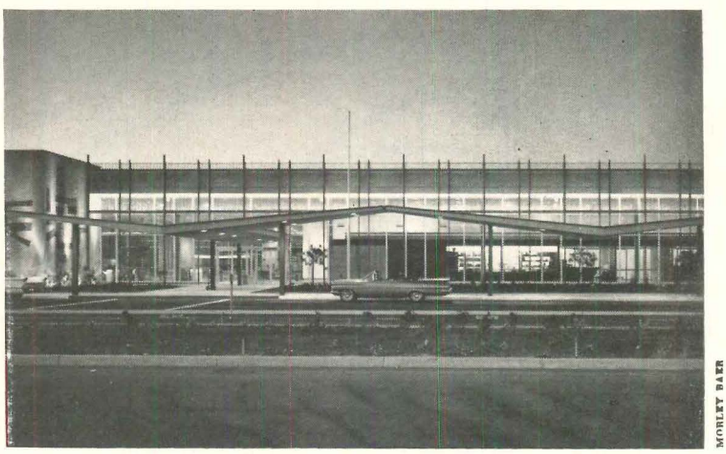
ONTARIO, CALIF. AIRPORT, by Architects Harnish, Morgan & Causey, is a small, efficient flying facility which also pays some attention to architecture. The tall, two-story waiting room with ticket offices has the usual glass fronts facing the field and the approach road, but in this case they wear handsome, glare-shielding grilles. California's climate permits open-air walkways to the loading stations. Pleasant planting has been started around them. General contractor for the terminal, Service Construction Co.



DAN OWEN & CO.

SYRACUSE TERMINAL (above), at Clarence E. Hancock Airport in upper New York State, was designed by Architects Ketcham-Miller-Arnold. The building sits under a big folded-plate concrete roof supported by exposed concrete columns. Steel skeletal framing, with short span joists carrying a concrete deck, completes the structure, which is walled in brick and glass framed in aluminum. The terminal building is part of a three-stage, $5 million improvement program which includes everything from approach roads to new runways. General contractor, Vincent J. Smith, Inc.

THE FRESNO AIR TERMINAL in Fresno, Calif. (right), is a long, simple shape delicately detailed in steel framing, wearing long walls of glass which grow from a solid masonry block which bears a mural by Raymond Rice. A graceful anodized aluminum sun screen is set outside the roof line of the steel structure. The architect for the $1.5 million building, a local AIA prize winner, and for other elements in Fresno's sizable airport expansion program, is Allen Y. Lew. General contractor, Fred S. Macomber.



MORLEY BAER



WARREN REYNOLDS

MINNEAPOLIS-SAINT PAUL International Airport Terminal at Wold Chamberlain Field, designed by Cerny Associates, Inc., is a 485 by 245-foot, two-story structure sheltered by an immense folded roof of thin shell, lightweight concrete. An important part of the design is a four-lane approach highway elevated to the second-story concourse level and canopied by continuous umbrella shapes. Two elevated finger walkways lead to planes. General contractor, Foley Bros. Inc.

AUSTIN, TEXAS' TERMINAL is another deliberate use of air-age silhouettes to establish strong architectural identity. Architects Fehr & Granger conceived not only the roof of the main building but also the control tower behind it to act as eye-catching shapes against the sky—important in a graceful, not overly massive, way. The single, large, unified shelter, with its undulating, space-framed roof, houses all the usual airport functions. General contractor, B. L. McGee Construction Co.

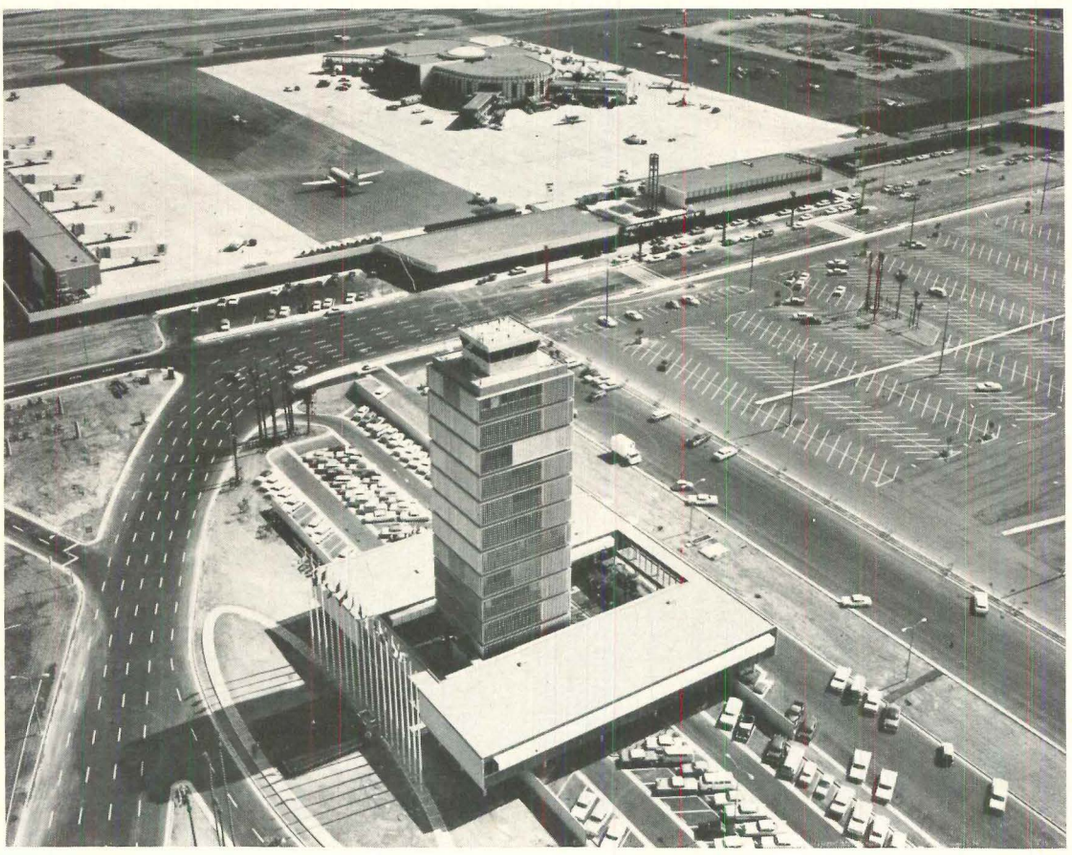


MEARS PHOTOGRAPHY

LOS ANGELES AIRPORT, like a world's fair, has a "theme building"—a restaurant hung 135 feet aboveground from intersecting arches (see photo below). The control tower (right) is as large as an office tower, which, in fact, it is. The walls of the tower are shielded from the sun by a second outer wall of slender vertical louvers. Adding to the fairlike flavor of the airport are huge parking lots and ample flapping flags. Architects: Charles Luckman & Associates, Welton Becket & Associates, and Paul R. Williams. Contractors: for tower, Chotiner & Gumbiner; for restaurant, Robert E. McKee.



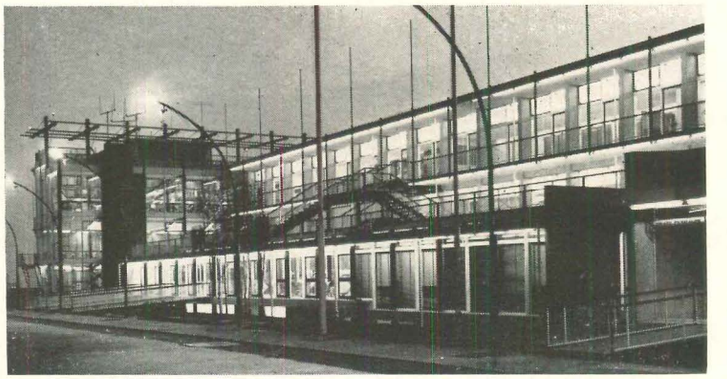
RALPH CRANE



LEIGH WIENER



JOHN R. PANTLIN

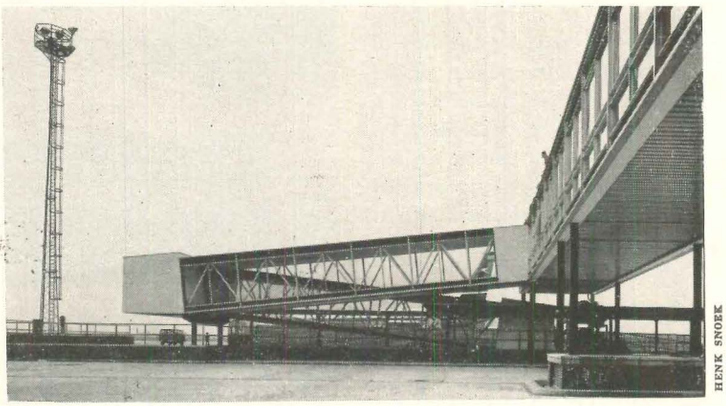


MILAN'S NEW TERMINAL at Malpensa, designed by Architect Vittorio Gandolfi, is a glittering, steel-framed, glass-enclosed gateway to that industrial area of northern Italy. The building is highly geometrical in character—the exterior framing, stairways, poles, and roof protuberances, and the terraces for plane watching, all echo and dramatize the intensity of the city's activity.

GATWICK AIRPORT, not far from London, is designed to receive flights diverted from London, and to handle traffic between England and the channel islands. The architects, Yorke, Rosenberg & Mardall, set the terminal building directly over a main highway and built it of poured concrete on a structural grid of 20 feet, and sheathed the walls in steel and glass. Since passengers arrive at the terminal not only by road but also by train, it functions as a railroad station too.



HENK SNOEK



HENK SNOEK

LONDON AIRPORT, by Architect Frederick Gibberd, is deliberately, quietly organized. "Since everyone who travels is slightly keyed up," says the architect, "one of the prime objects in the design was to put him at ease in a comparatively calm and unhurried atmosphere. Equally important was to give the foreign visitor the impression that he was coming to a civilized place."



A. PAPILLON

NEW ORLY TERMINAL, by the Paris Airport Authority (Chief architect, Henri Vicariot), is a vast, glassy building which cost $24 million to construct and is the biggest building completed in France since Louis XIV erected the Invalides. The steel frame houses 1.4 million square feet, distributed on nine different levels, with parking out back for 4,000 cars.

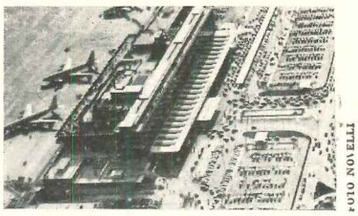
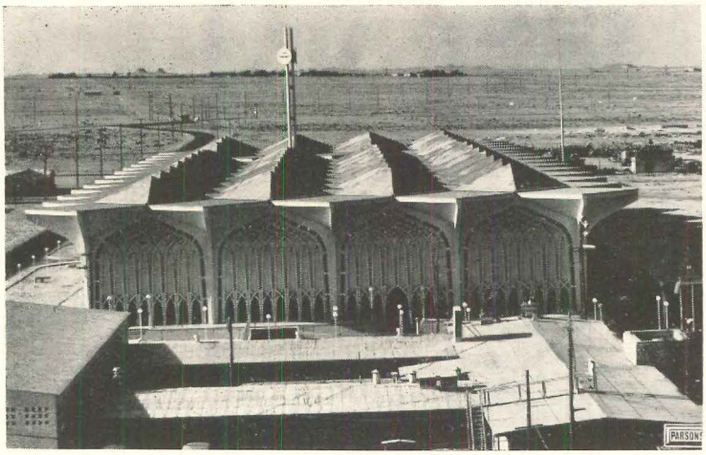
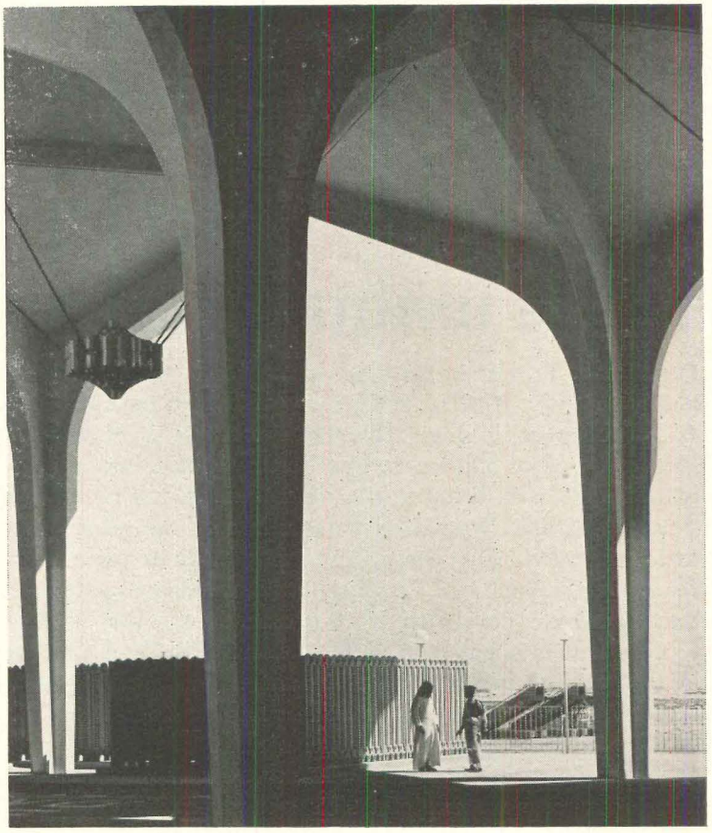


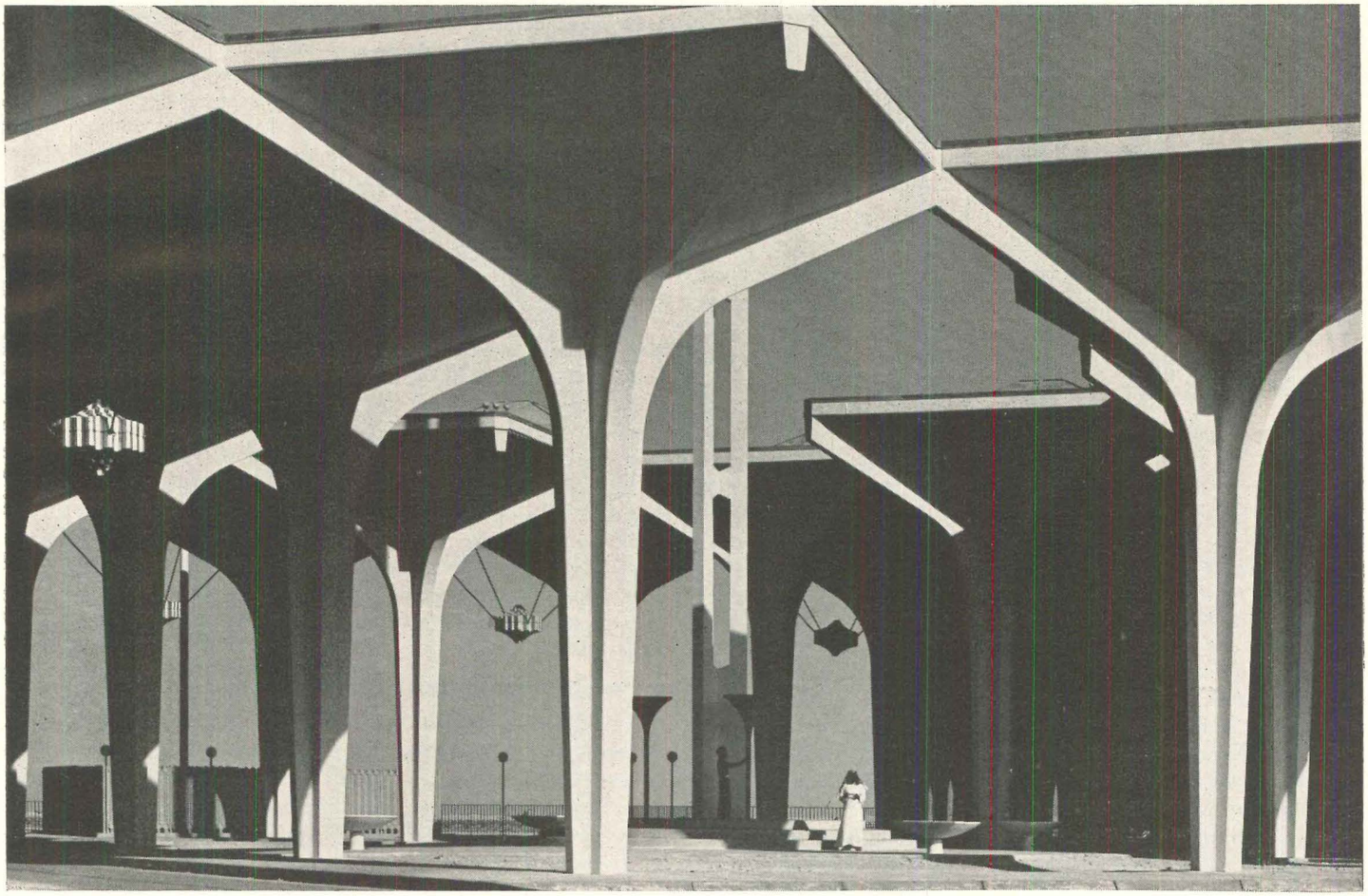
FOTO NOVELLI





ARRIVAL IN ARABIA. Minoru Yamasaki was the designer of the temple-like new Civil Air Terminal in Dhahran, Saudi Arabia (in collaboration with the Ralph M. Parsons Co.). When he first went to look at the site he was disappointed to find little Moslem influence anywhere. So he brought some exoticism to bear himself.

He also brought technical advances. This is believed to be the first precast concrete structure in its part of the world. Water evaporates so quickly in this climate that on-site precasting, at night, was the only practical method, with the precast sections kept wet while curing during really hot periods (130 degrees in the shade). In plan the 520-foot-long building is divided into three areas: international flights at one end; domestic flights at the other; separating them is a court—to be landscaped (photo below).



PHOTOS: RALPH M. PARSONS CO.

THOSE UNIQUE AND UBIQUITOUS BROTHERS URIS

Out of the brawniest building boom of all time, two red-haired sons of a Russian immigrant blacksmith have emerged as archtypes of a singularly nervy breed—the Manhattan speculative office builder. It wasn't always easy, and a lot of it had to do with being in the right place at the right time. But Harold and Percy Uris today stand at the pinnacle of their profession. They have, quite simply, built more office space than anyone else. In fact, the 8.7 million square feet they will have developed by the end of this year is over twice as much as has been built in the whole city of Chicago in the postwar period (FORUM, May '61). And this total represents about 14 per cent of all new office space created in Manhattan since 1947.

To develop this volume of office space evidently does not take a vast organization (the Urises have generally operated with not many more than 100 persons) or masses of equipment (they don't own a single bulldozer or climbing crane). All it really takes is guts and savvy, and the brothers Uris have plenty of both.

The Uris brothers have established a building pattern which they have traced with good fortune since World War II. They acquire a site, sometimes simultaneously with lining up the first tenants for a projected building which will fill as much of the lot as the zoning laws permit. Long before the building is finished, the Urises usually have tenants signed up on long-term leases, and this has meant that they can command permanent mortgage money at the best rates available. They build what has been characterized as "canned space"—it is not top-quality space but also it is rentable at $1 or more under the going rates for most other new space.

Land values no higher than at the 1929 peak

In Manhattan's burgeoning market for office space, esthetics have generally been overlooked, and not only by the Urises. But if they have not pioneered in the building of masterpieces, they have shown the way to the development of hitherto unexplored sections of Manhattan, and therein lies much of their success.

One of the curious facts of the great Manhattan building boom is that land prices generally have not been anywhere near so high as most people believe. As William Zeckendorf said recently, "current land values . . . are no higher today than their 1929 peak, in present dollars." Instead of land values on Fifth Avenue and Park Avenue, where the boom started, skyrocketing to $1,000 per square foot, they topped off at around $400 and new building spilled over into adjacent areas, namely Madison, Third, and, more recently, Sixth Avenues. The reason, Zeckendorf says, is that the market seems unwilling to support rents of more than about $7. In fact, Zeckendorf claims, "across the board, about 80 per cent of the new office construction now on the market can be delivered for between $5 and $6 a foot for large space."

Thus, Uris brothers built, in the early stages of the postwar boom, on Park, Madison, and Lexington Avenues. But as the market expanded fast, and land prices rose without a commensurate rise in rentals, they built on Third Avenue and then downtown with the huge (1,324,000 square feet) structure at No. 2 Broadway (FORUM, Feb. '59). They found that tenants could be lured into these areas, particularly for modern space at lower-than-the-going rentals. (In some cases, there have been difficulties, but the Urises were quick to buy up leases, or even old buildings, if it meant getting a tenant for large space in one of their new buildings. In one case, they even went into the restaurant business temporarily to get a Park Avenue site.)

These sorties into parts of the city which have seen little new building have generally paid off, particularly in the case of No. 2 Broadway. This structure is perhaps the most successful Uris building—in financial terms—to date, and the most efficient in the whole Uris ménage. It returns $1.13 per square foot (before taxes), well above the average 83 cents per square foot for all operating Uris buildings.

A share of prosperity

Two years ago, Harold, Percy, and their confreres in the old Uris Properties Corp. (with related corporations) swapped their equity in nine different corporations for stock in a new corporation, called Uris Buildings Corp. The real purpose of this transaction, however, was to raise some new capital, which they did by selling some $20 million of debentures (at 6½ per cent interest) plus common stock in the new corporation to the public.

The offering was a success, in the robust market of the time, and Uris stock, offered at $12.50, has been as high as $30.50 (and as low as $12.12) per share. Last month, it sold at around $18.50.

The creation of equities

Since the Urises became the Uris Buildings Corp., they have had to reveal much more financial information than they ever did before, and such revelations indicate the tremendous profit in postwar Manhattan office building. For example: the cost of the buildings currently operating under UBC (the brothers own several Manhattan buildings that are not part of the corporation) is about $65 million, and they are carried at about this figure on the books of UBC. But the appraised value of these properties is nearly twice that, about $124.5 million. This is what was evidently meant when the first UBC annual report noted that "the main objective [of the corporation's] activities is the creation of equities by the construction of efficient and desirable buildings in prime locations."

It would seem that such equities have indeed been created, and not only for the corporation. The value of the stock that Percy and Harold hold in the new corporation (between them they own 62 per cent of UBC) is a cool $38 million, and this does not include any of several properties the brothers hold in their own account.



GENE PYLE—TIME

Percy and Harold Uris

1 2 3 4

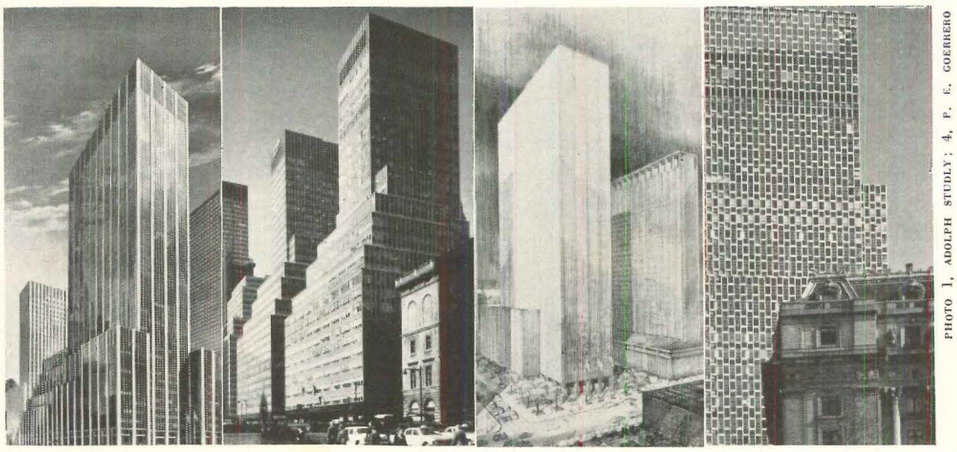


PHOTO 1, ADOLPH STUDLY; 4, P. E. GUERRERO

Sperry Rand Building 320 and 350 Park Ave. 1301 Ave. of Americas No. 2 Broadway

Besides the creation of equities, the Urises are masters of that fascinating bookkeeping notion, the cash flow. This is generally considered more important than net income after taxes as a measure of potential gains, for it also includes depreciation as well as amortization of deferred charges which are treated as income.

The wonders of the cash flow

Cash flow provides more building money and, as new buildings add rental income and rapid depreciation, it will give UBC greater fiscal flexibility to tackle new deals. Cash flowed last year at the rate of $1.44 per share of stock and is expected to hit $2 per share this year (or around $6.5 million). In effect, this means UBC retains over one-quarter of its gross income—by contrast, General Motors Corp. does well to keep 7 per cent of its gross.

Cash did not always flow so easily for the brothers Uris. After joining his father, Harris Uris, who had become a builder in the 1920s following years in the iron-working business, Percy Uris was forced into involuntary bankruptcy in 1931. At that time, Percy Uris, who had, in the 1920s, built some of New York's largest hotels, listed liabilities of $6,483,526 and assets as "nominal." But after reorganization and several years of minor real-estate dabblings, the brothers came back again. In the late 1930s, in fact, things were looking rosy enough for Percy, the fast-talking financial whiz of the Uris team (the more taciturn Harold is in charge of construction operations), to contemplate buying the Biltmore Hotel from Harold Vanderbilt. Uris, a crackerjack bridge player, had often played with Vanderbilt and thought he could swing it until one occasion when the two, playing as partners, went down disastrously in a game. "There goes the Biltmore," thought Percy, and he was right.

Even though Percy Uris did not get the Biltmore, he currently oversees an awsome building empire. Besides the established office buildings owned by UBC, there is the new Sperry Rand Building (owned jointly by UBC and Rockefeller Center) and another Sixth Avenue office structure of some 1.7 million square feet, which is said to be the first built under New York's new zoning.

UBC has also gone into the hotel business, in two ventures with Hilton Hotel Corp. One is a 2,153-room hotel on Sixth Avenue (designed by William Tabler) in which Rockefeller Center Inc. has a 25 per cent interest, and the other will have 1,200 rooms on Connecticut Avenue in Washington, D.C. (also by Tabler).

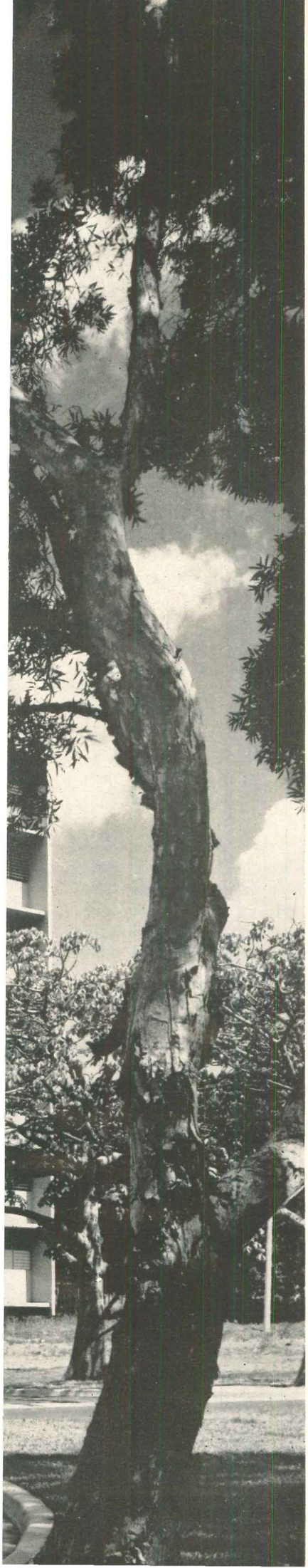
The Washington project will be UBC's first outside New York, aside from their excursion into Philadelphia's Penn Center. There, Uris brothers built two office buildings (both designed by Emery Roth & Sons). They had reportedly planned another, but the city wanted the site for a park and Richardson Dilworth, then mayor, finally forced the Urises to abandon their plans, as he huffed: "Putting another soapbox like the Uris building in Penn Square would ruin our big chance to make something out of the area."

No monuments

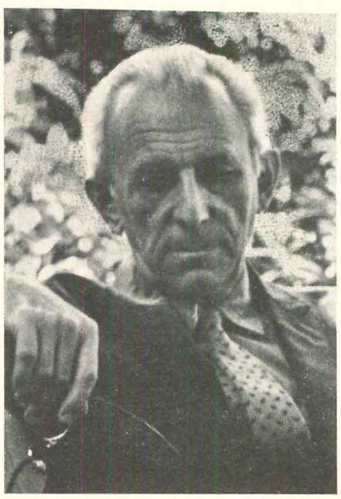
Percy, now 63, and Harold, 58, Uris have certainly come a long way since the days when the Biltmore was lost, so to speak, on the turn of a card. Although they have cluttered Manhattan with some of the least distinguished structures in its history, they have also demonstrated how to meet the market demand for space, and do it efficiently and profitably. They still seem confident about the continuation of the New York office building boom, but, with UBC now a growing power, they are also looking further afield. Wherever they build, however, it will be with one eye on the balance sheet and the other on the flow of cash. Lately, some individual partners have allowed themselves a few cultural gestures: Percy gave $2.5 million toward a new Columbia University building (students promptly and unkindly attacked its esthetics); Harold has donated fine sculpture to his alma mater, Cornell; and nephew B. H. Friedman, a UBC vice president, is busily filling Uris lobbies with abstract art. None of this is allowed to interfere with business. As Percy declared some years ago: "We are not in this business to build monuments." That, of course, has long been evident. END

1) Architects: Emery Roth & Sons; Harrison & Abramovitz, consulting architects; 2) and 4) Architects: Emery Roth & Sons; 3) Architects: Shreve, Lamb & Harmon.





ALEXANDRE GEORGES



Architect Henry Klumb, 57, born in Germany, came to the U. S. in 1928 to work with Frank Lloyd Wright, then, in 1944, moved on to San Juan, Puerto Rico. At left is one of his recent women's dormitories on the Rio Piedras campus of the University of Puerto Rico. Circulation is on outdoor corridors (see plan, page 88). Each floor of rooms, says Klumb, "is designed like a garden path with cottages on each side."

KLUMB OF PUERTO RICO

When Henry Klumb arrived in Puerto Rico 18 years ago to work for the insular government, one of his early assignments was to design a one-room schoolhouse. The budget, which he met, was $800—complete.

Some things have happened to the dollar since then, but even more has happened to this offshore part of the U. S. Although that politely anxious description, *underdeveloped area,* had not yet come into wide use, it fit Puerto Rico perfectly. But today, less than two decades later, the island has been lifted by the efforts of its own people and by massive, adroit aid from the mainland, to the threshold of North American prosperity.

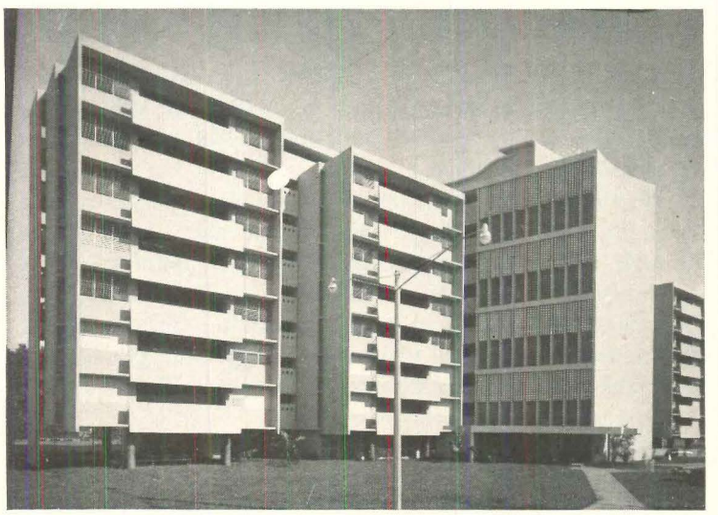
Here are some indications: in 1940 the average family income in Puerto Rico was $611 per year; last year it was $3,003. In 1944 only 22,051 people paid income taxes, remitting a total of $16¼ million. In just the first five months of the current year the income taxes received were up to almost $71 million, and the number of citizens filing was even more impressive: over 157,000. One of Architect Klumb's firmest convictions and most frequent conversational assertions is that architecture must be an exact economic mirror as well as a generally symbolic art. His buildings make the same statement (and perhaps this is why they still seem very planar for work by a former Wright student). But like the island on which he now works, his design techniques have recently come far, and fast.

First and most evident in Klumb's architecture is the increasing quality of its finish. He is using local tile floors where he could use only concrete earlier; there are higher lighting levels; there is greater use of acoustical finishes. Less tangibly, there is a richer flavor in the design itself—more experiments, more intricate screens, more polish.

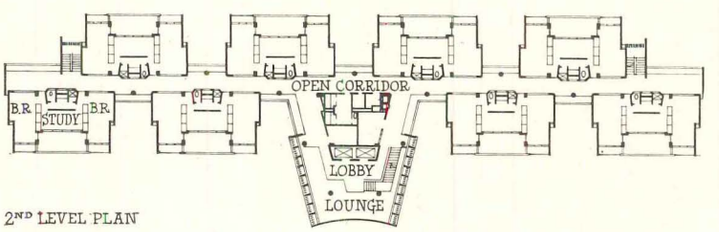
A second strong indication of the island's uplift: actual amenities appear more frequently in Puerto Rican buildings by this architect (and others) than earlier. There is more space per person in new buildings. There are lobbies and lounges, items which Klumb calls "necessary but not essential . . . . Back in the beginning we could provide only the essentials, and that's all. Period."

Further, even the types of buildings completed have changed. For example, Klumb has long been the architectural shaper of the two campuses of the University of Puerto Rico. It was back in 1948 that he designed his first student-union building, but it was not until ten years later that the University found the money to build it. Completed last year, the building's cafeteria already has broadened the standard diet from the

CONRAD EIGER



Women's dormitories for the University of Puerto Rico; below, two-story entry hall in the same building.



2ND LEVEL PLAN

ALEXANDRE GEORGES



old student staples, rice and beans. (Students also have more money to spend on food.) Now a theater is being added. Other work completed recently by Klumb's 24-man office includes building types a very long way from one-room rural schoolhouses: a pharmaceutical factory for Parke Davis, a $3\frac{1}{2}$ million shopping center, co-op apartment houses, a hotel, several office buildings, and a number of layouts for suburban subdivisions.

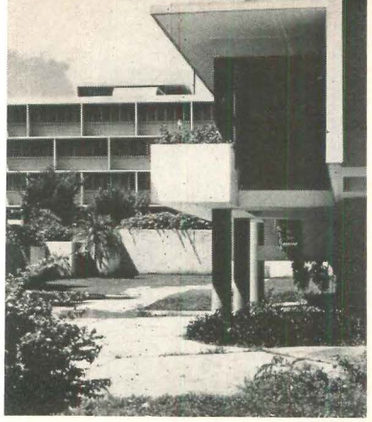
A final improvement in building on the island is the increased skill of local contractors. Concrete has always been their material, but in the past dozen years they have learned how to handle it. Klumb still is pressing for more precasting, but with limited success. For example, in the tower which houses mechanical services at the Parke Davis pharmaceutical plant (top photograph, far right, opposite page) the contractor did precast the horizontal louvers, as drawn, but then, with a shrug, built formwork for the rest of the precast specification and poured it in place.

Not everything has changed—notably Klumb's feeling about nature; he loves not only its general Caribbean beneficence but its quirks. This leads him to air condition but sparingly; he prefers natural ventilation through outdoor hallways or semiscreened openings. If these spaces get wet in storms, he points out that they soon dry. "I enjoy my own porch when the rain blows in. I just move a little. This is part of the constant change of nature, its vitality. This is proper human experience . . . the longer you live, the more you want to enjoy the natural phenomena that surround you. Before I arrived at Frank Lloyd Wright's, I was a little soft myself, too. I had been brought up in a city, and a raindrop would alarm me. But a gradual acceptance of nature becomes in the end a *need* for nature. Without that I couldn't live any longer."

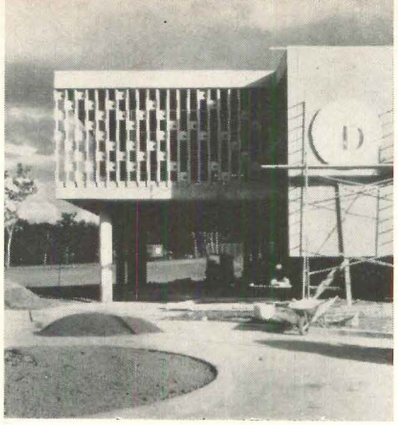
On the obvious matter of architectural lessons to be learned from the Puerto Rican experience, for application in underdeveloped mainland nations of South America, Klumb is not sanguine: "Puerto Rico is now 20 years ahead of most of the South American mainland. To find answers for their pressing problems, it would be necessary to look backward. In those underdeveloped countries, the rich get richer and the poor poorer, but not here in Puerto Rico. Here the poor get richer and the rich are expected to contribute more.

"On the island we still need more teachers, schools, housing, and many other things, but every year more is done about it. This place is not stagnant. Things here are being done in every field, including architecture—perhaps not enough, really, but enough to keep the island moving all along the line. And that's the trick—to keep it moving."

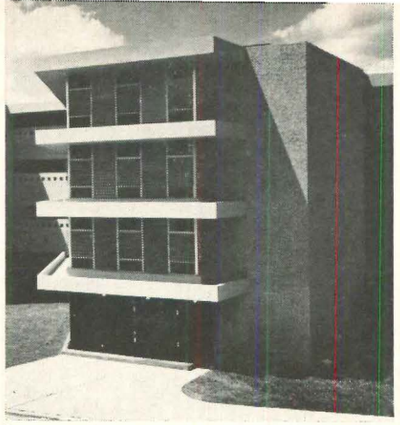
PHOTOS 3, 5, 6: ALEXANDRE GEORGES



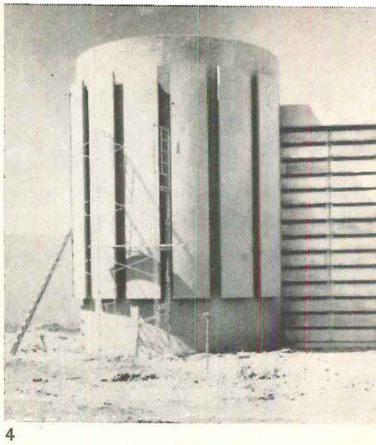
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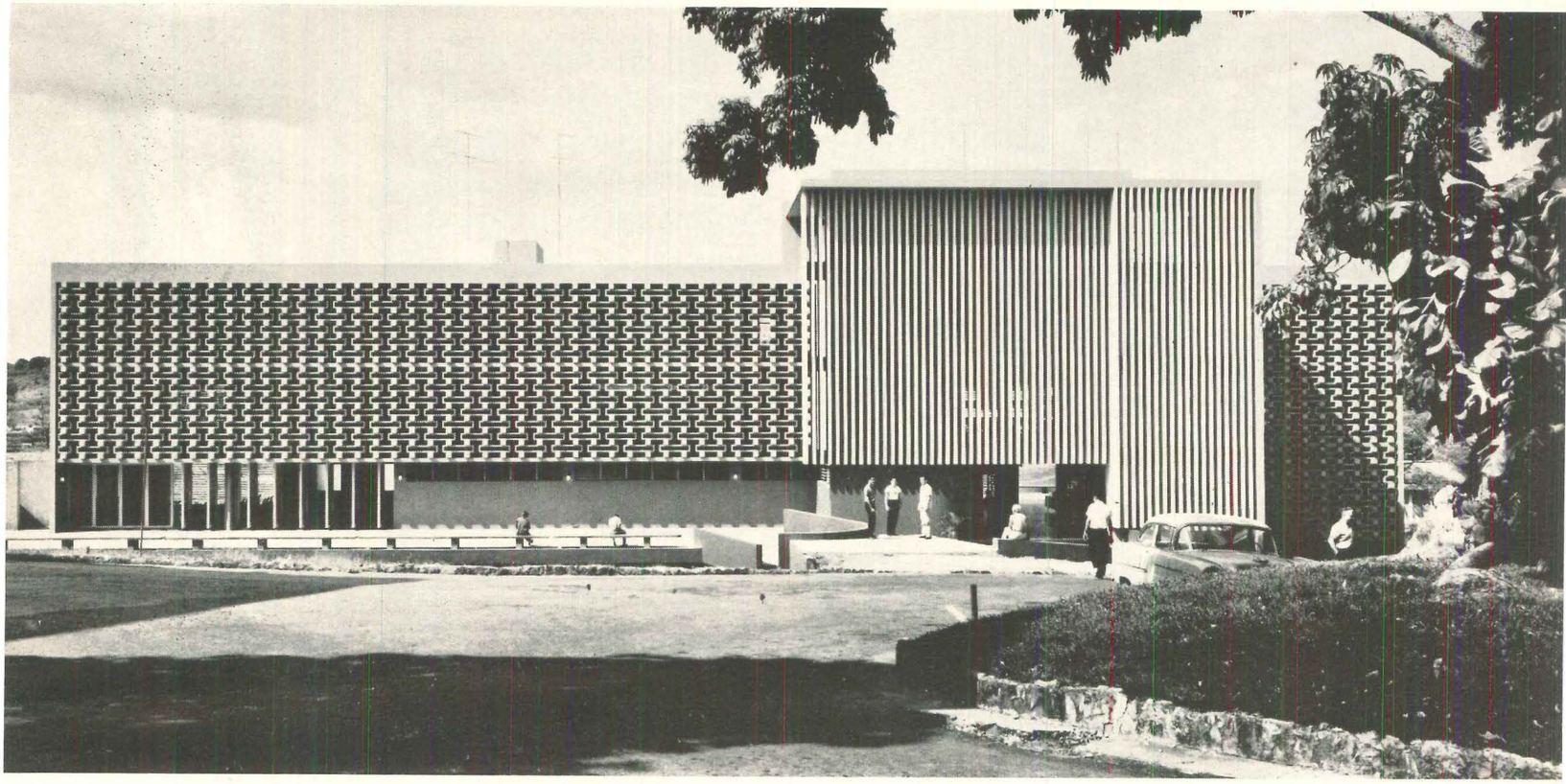
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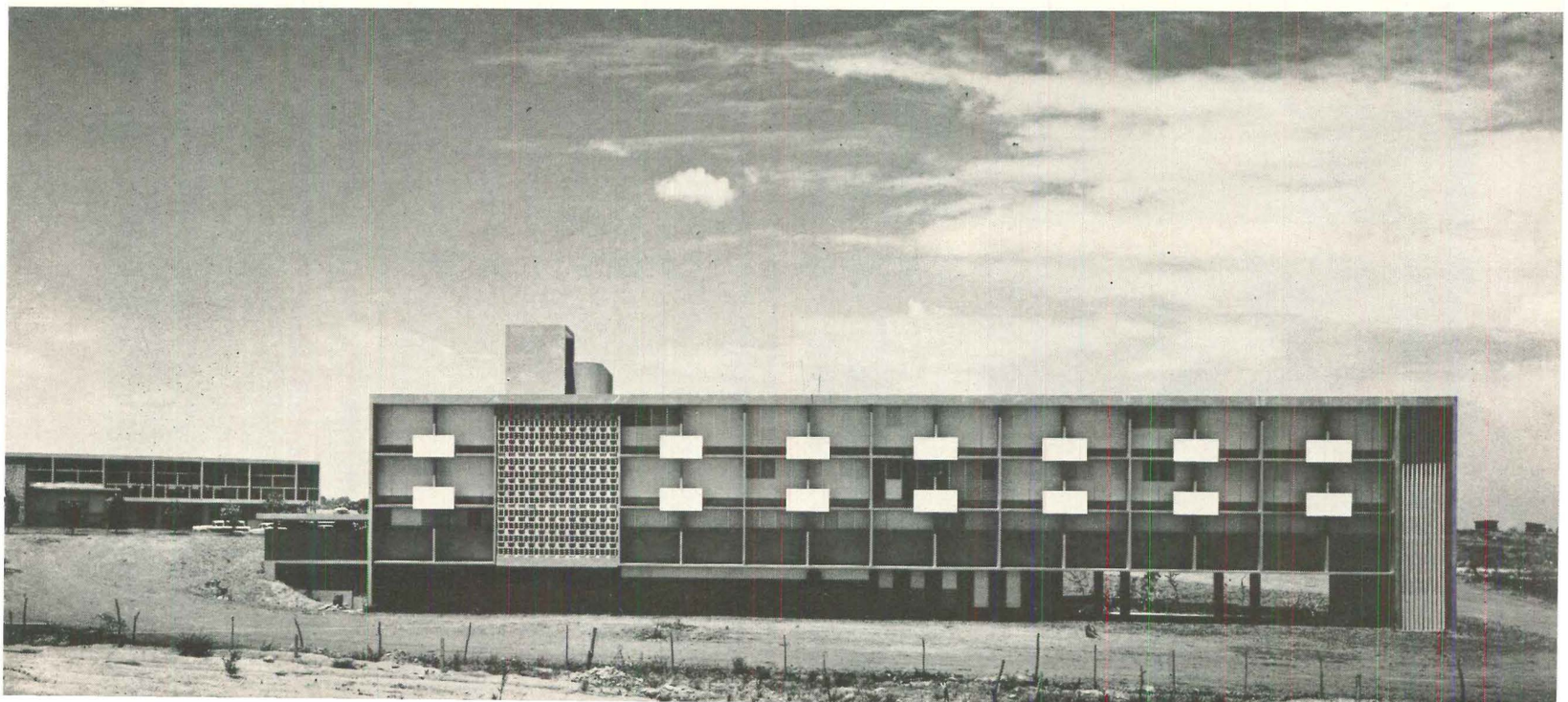
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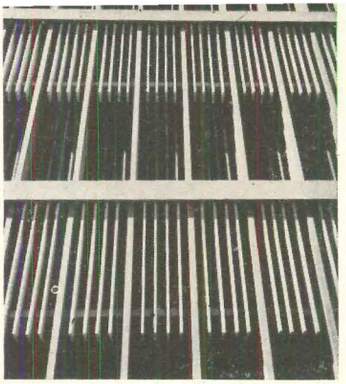
Sun and shadow in Puerto Rico. The most recent crop of buildings by Henry Klumb's office includes: 1) College of Education and Student Health Center, University of Puerto Rico; 2) offices for Parke Davis; 3) men's dormitories for the University of Puerto Rico; 4) equipment room at the Parke Davis plant; 5) student union for the University; 6) faculty residence hall at the Colegio San Ignacio de Loyola.

5

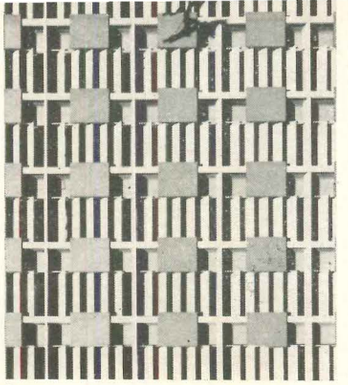


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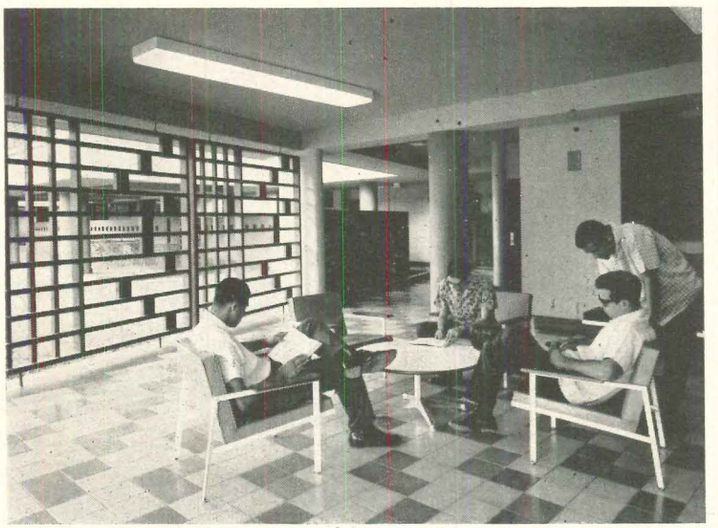
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2

Klumb uses louvers and screens for sunshading (photos 1, 6), for security (photos 3, 5), to disguise unit air conditioners which will be inserted later (photo 2), ard sometimes, side by side, for several reasons (photo 6). The climate frequently permits him the real architectural luxury of ending rooms without a wall, even a glass one (photo 4).

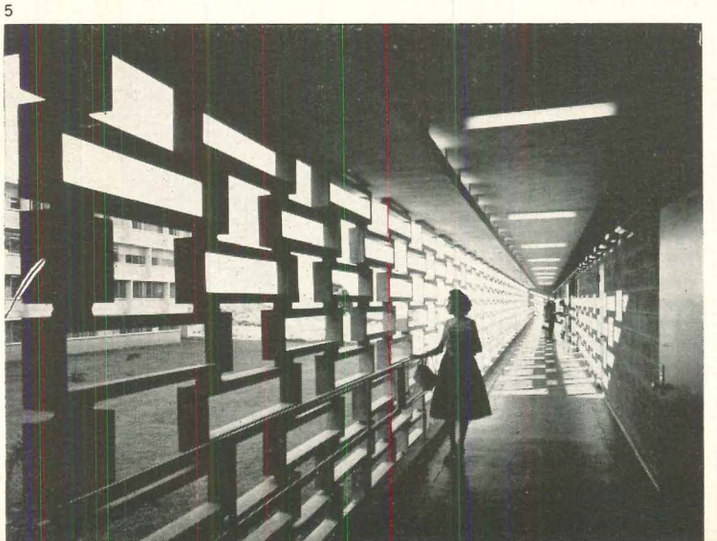
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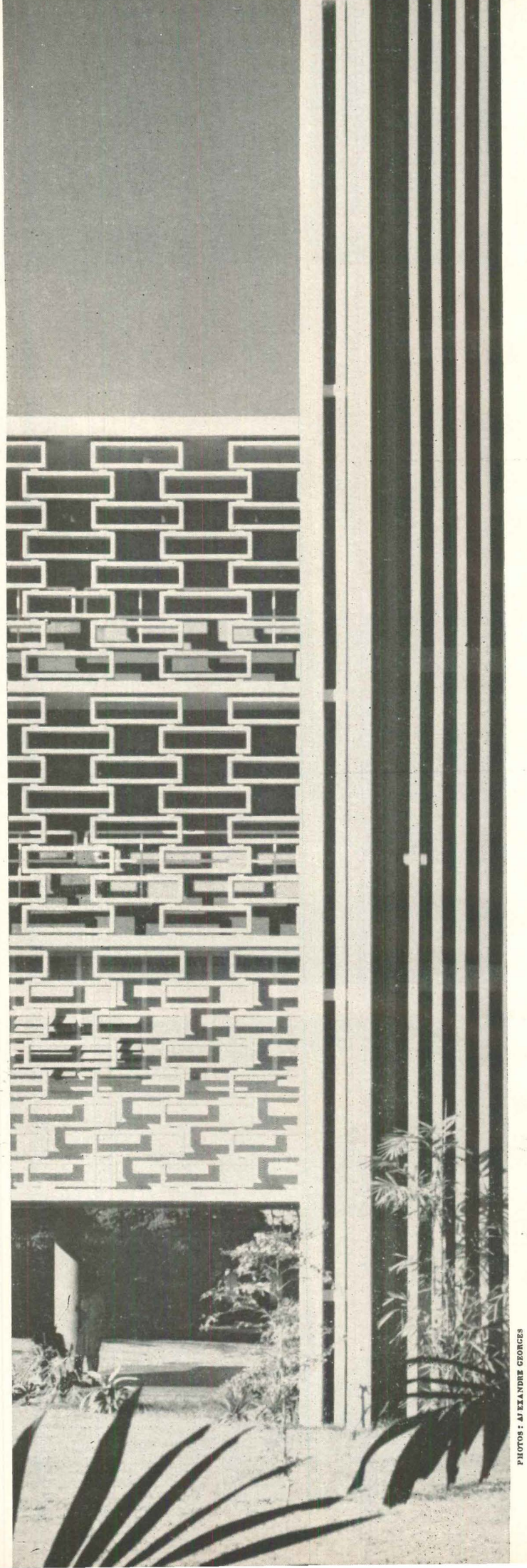
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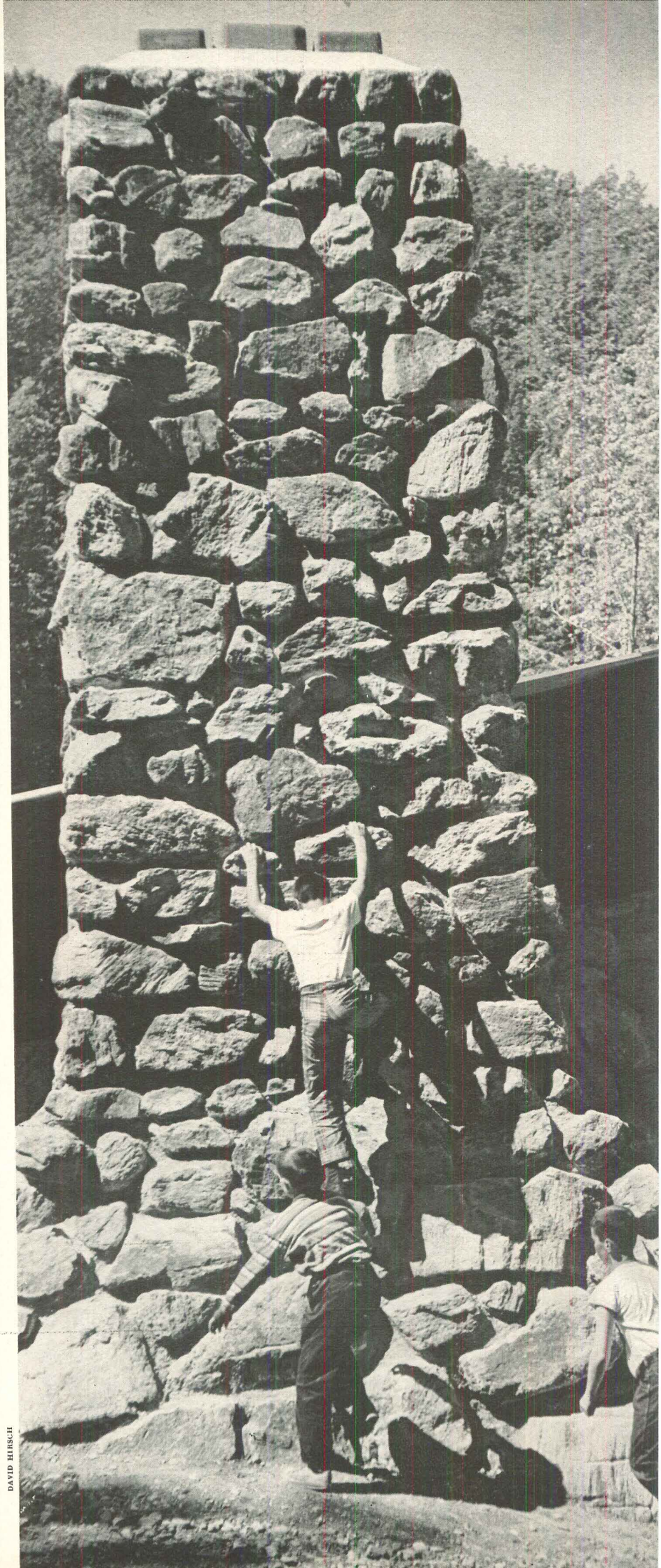


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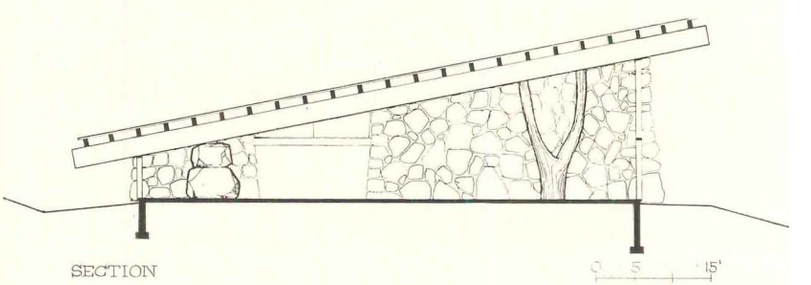
PHOTOS : ALEXANDRE GEORGES

TWO CAMPS DESIGNED FOR SUMMER FUN

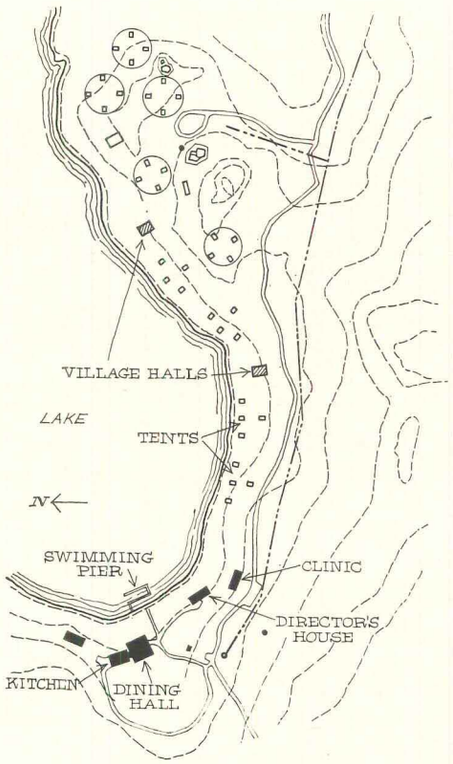


DAVID HIRSCH

Focal point of Camp Hayden is the dining hall (photos above and below), which faces the future lake. It has rugged fieldstone walls, a steep pitched roof (section, right).

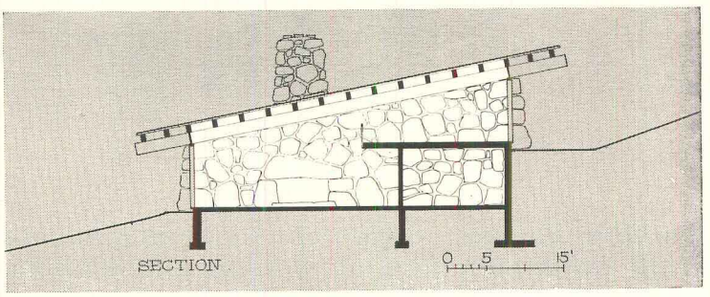


PHOTOS: DAVID HIRSCH





Split-level "village hall" follows slope toward lake (section below)





Administration buildings are raised on log columns stripped of bark



Tents for four boys have fold-down bunks, vent panels, canvas flaps

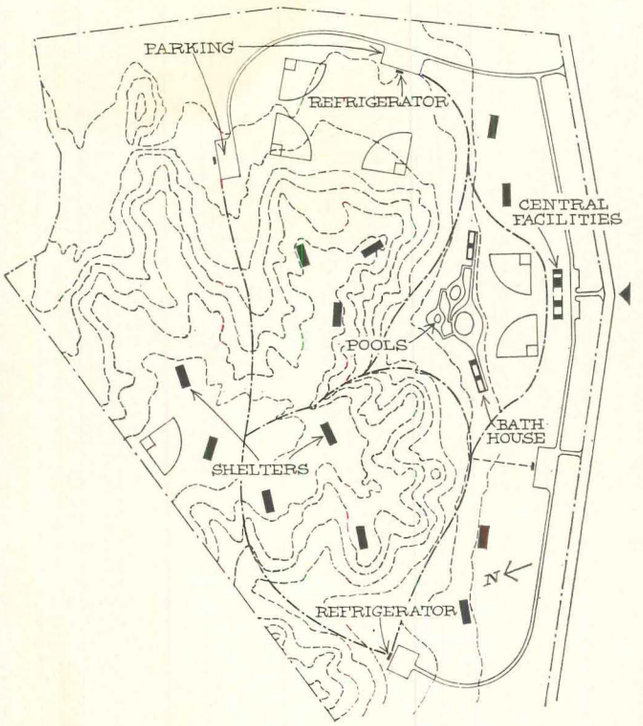
PHOTOS: WALLACE LITWIN

The two camps by Architect Edward L. Barnes shown on these pages differ sharply from each other in program and appearance, but they share two important qualities: their imaginative planning and handsome use of simple materials make them both fine architecture for summer fun.

Nestled in the wooded reaches of the Sharpe Reservation near Fishkill, N.Y., Camp Hayden (this page) is the most recently completed of the *New York Herald Tribune* Fresh Air Fund camps. Its concept is a continuation of Architect Barnes' earlier work there (FORUM, July '55 and Oct. '57): tents scattered around meeting halls to form a handful of village groups, which are in turn placed around a future lake to share a common dining hall and infirmary. This hierarchical arrangement gives campers a distinct experience at three different levels: the tent, the village, and the community. The small tents are open wood and canvas. The village halls, larger and more substantial, have rugged fieldstone walls with raked joints. Finally, the big dining hall, also of fieldstone with a pitched wood roof, is virtually one enormous cavelike room, with a low kitchen wing to one side (photos left). The effect throughout is of primitive materials put together by hand, even to the use of a cut-off tree as a fanciful wood column in the dining hall. Says Barnes: "A city boy at Hayden knows right away he's in the country, in touch with the land."

FACTS AND FIGURES

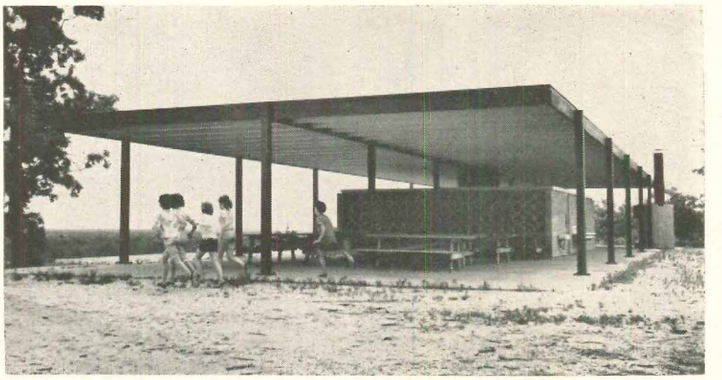
Camp Hayden, Fishkill, N.Y. Owner: New York Herald Tribune Fresh Air Fund.
Architect: Edward Larrabee Barnes (Richard R. Moger, associate in charge); Engineers: Atlas & Jarcho (structural), McGuinness & Duncan (mechanical, electrical); Contractor: O'Brien & Kinkel.
Building area: 13,000 square feet. (Site plan above shows only one half of eventual camp.) Construction cost: $175,000, plus $40,000 for furnishings and equipment. Cost per square foot: $13.50. Financing: by private donations.



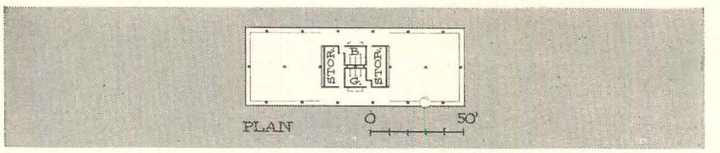
The Henry Kaufmann Campgrounds in Wyandanch, Long Island, are designed to provide 2,500 day campers with swimming, games, and crafts. The plan reflects the program as a process: a loop road brings campers in by bus where they can drop off their lunches in simple refrigeration structures. From there they disperse to open steel shelters containing covered eating and crafts areas around a toilet-storage core, until their turn comes to converge on the central swimming pools. The idea of dispersal is all important: despite the vast total number of kids there is no mass institutional feeling because the groups are generously spaced in woods.

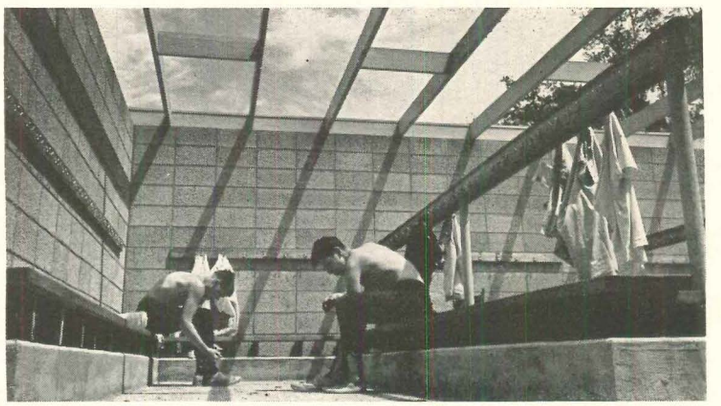
Materials are steel painted black-green, sand-colored concrete block, and generous cement paving which together produce a sunny, open effect not unlike that of a beach resort.

The main architectural feature of the camp is a group of three pools conceived like a giant earth sculpture (opposite). They are used by groups of 500 at a time: one shift undresses in one bathhouse while another is swimming, then moves out to take its turn while the first group dresses in the other bathhouse before redispersing to its shelters in the woods. The pools—diving, swimming, and wading (the latter 130 feet across)—are elliptical and grouped at slightly different levels, with wide bands of paving reinforcing their monumental shapes.

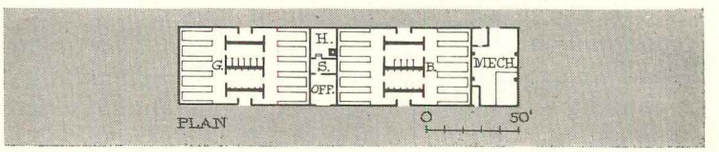


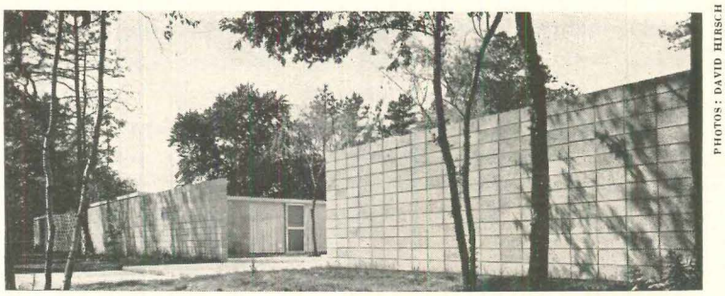
Shelters have crafts and eating space around a core (plan, below)





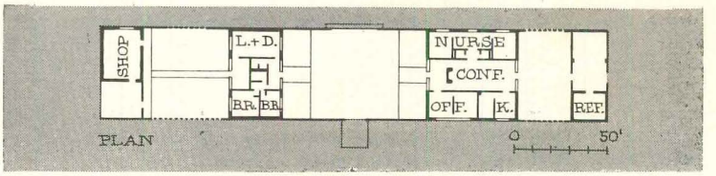
Bathhouses of concrete block have lattices open to the sky (see right)





PHOTOS: DAVID HIRSCH

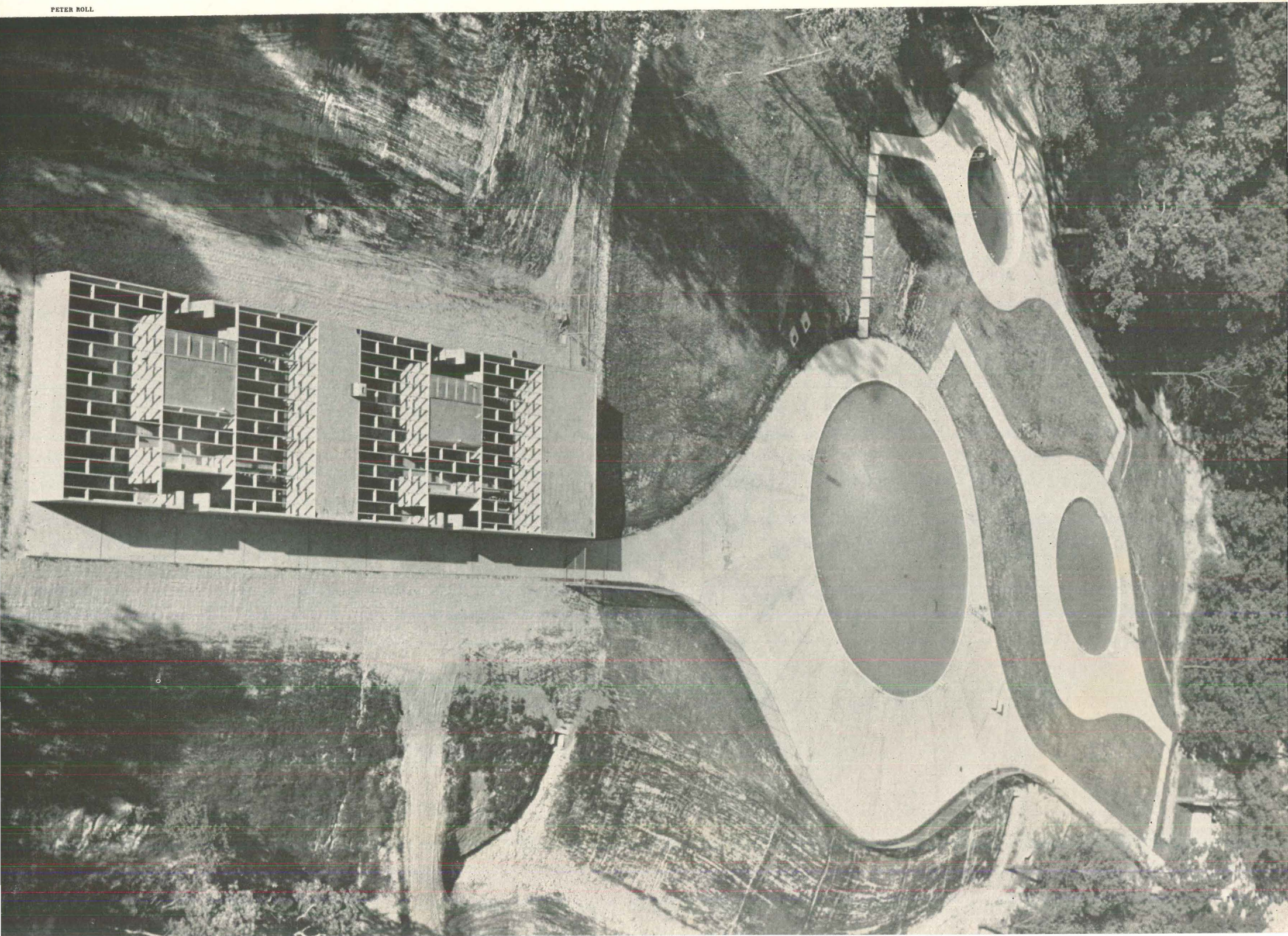
Offices and services face gardens shielded by high walls (plan below)

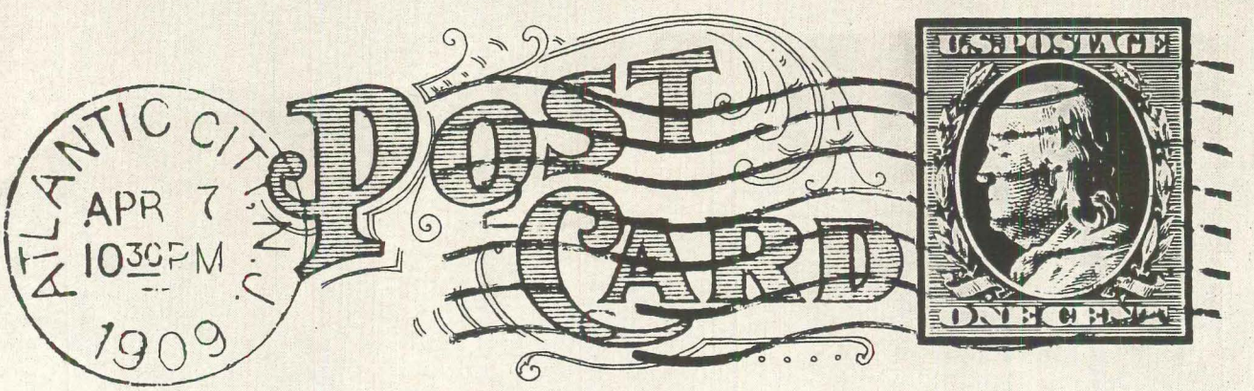


FACTS AND FIGURES

Alice N. Proskauer Site, Henry Kaufmann Campgrounds, Wyandanch, Long Island, N.Y. Owner: Henry Kaufmann Campgrounds Inc. Architect: Edward Larrabee Barnes (Richard R. Moger, associate in charge). Engineers: Severud-Elstad-Krueger and Atlas & Jarcho (structural), John J. Baffa and McGuinness & Duncan (mechanical, electrical). Interior Designer: Mary Barnes. General contractor: E. W. Howell Co.

Building area: 70,782 square feet (plus 14,700 square feet in pools). Construction cost: $897,506; $10.50 per square foot; $320 per camper. Financing: by private donations.

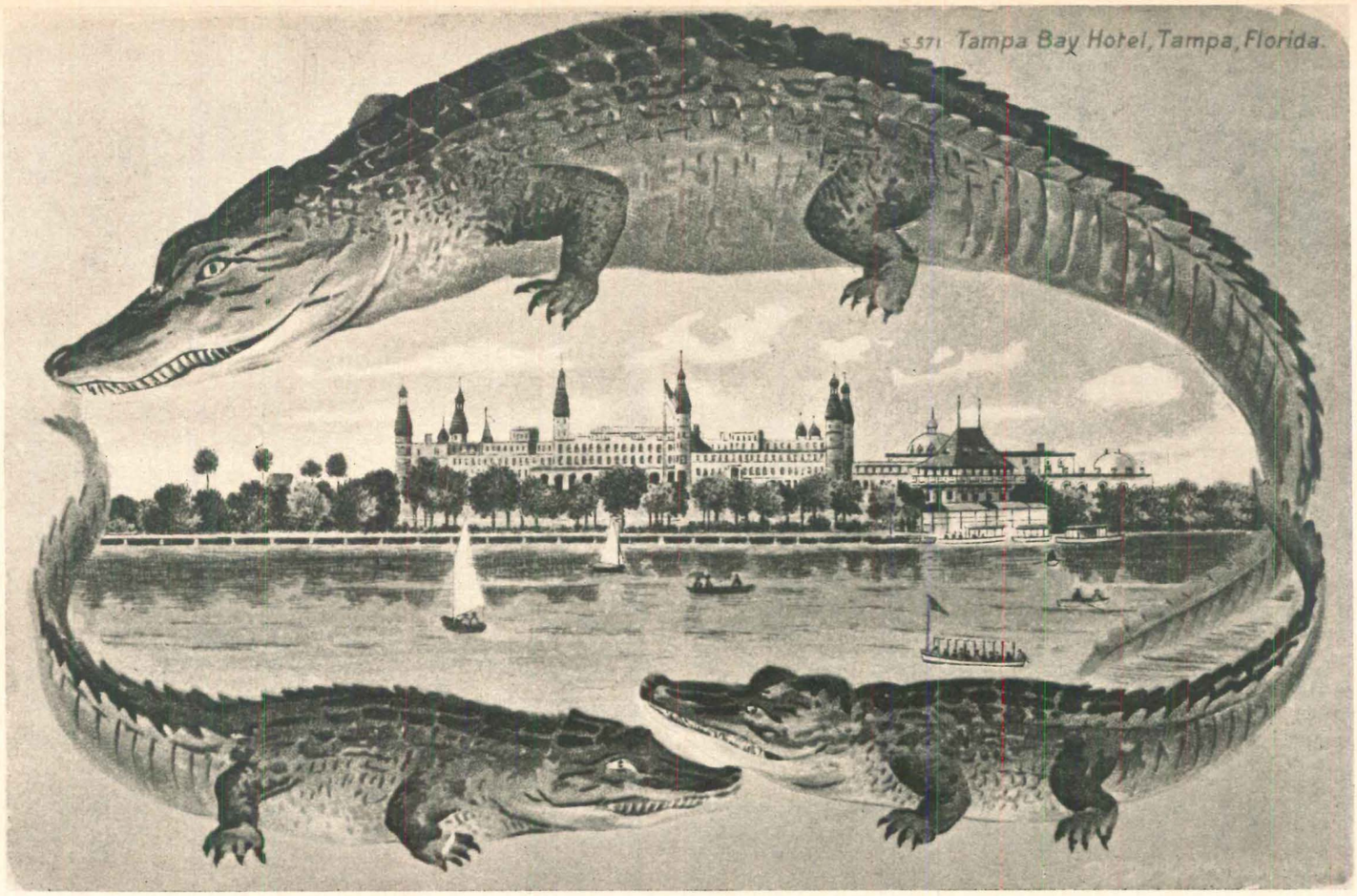




"Come on down"

They were like a kind of child art of the architectural drafting board, those resort hotels, casinos, and pavilions of the American 1900s. They rose on every choice seashore, they perched on mountain sites, and they reflected themselves in the waters of the hinterland lakes. Stylistically, they were wildly allusive—to Byzantium, to Gaul, to Rome, and Arthurian England. For example, where in the world is there anything quite like the joyously demented Poland Springs House (opposite) above Portland, Maine—that beautifully preserved brew of balustrade and tower, that vast caprice of fenestration and triumph of wayward mass? Relative to the great Poland Springs extravaganza, and still deep in fairyland, is the old Tampa Bay Hotel in Florida; but this is by comparison a disciplined, sustained, and concluded performance.

You find these buildings excellently documented on the penny postcards of the period. ("Here till the tenth. Come on down.") It is time to atone for an unjust disdain for those tinted little pasteboard views, before they disappear. Their fiftieth anniversary is at hand, and with this, the last living memories of the atmosphere of flannels and flirtations, of ice-water pitchers and corn-fed gaiety, and the gazebo that was off limits to the unchaperoned after dark. WALKER EVANS



Full-blown American-style gaudiness is exemplified in these scenes from Florida and Maine. But every time the grand style comes up for revival, the attempt falls into sentimentality, worth only a cute and soft-brained titter. The real old song simply cannot be sung again. Except in musical comedy, sumptuous naïveté is quite dead.

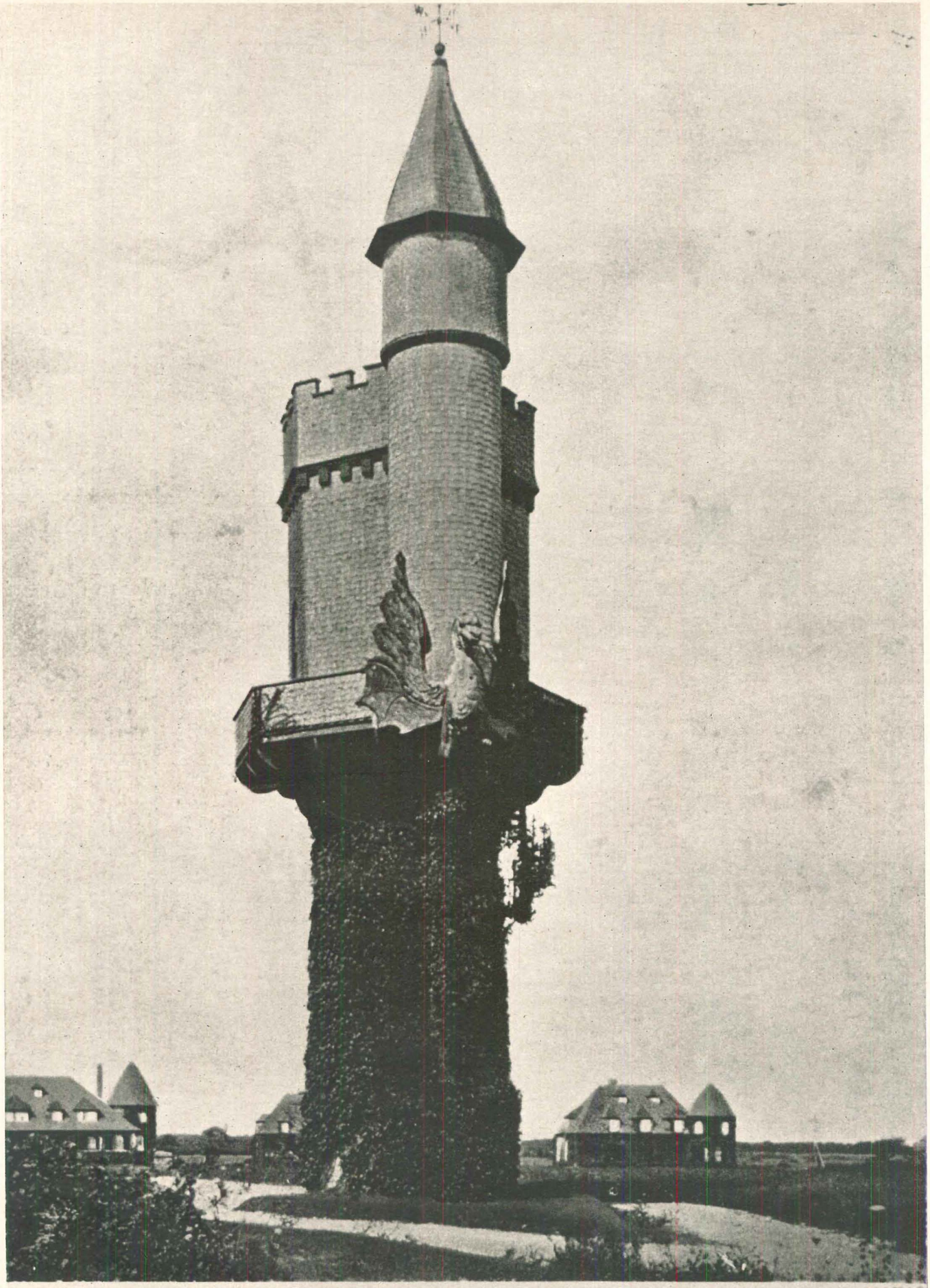




"Stopping here tonight 7/25/06" becomes for us a blue-green dream of Sunday baseball salted by Atlantic spray. In point of fact, Block Island is still dotted with this kind of building. Below is a Taj Mahal redreamed in Utah. It was one of the truly prodigious efforts in architectural theatricality of its time.

The battlemented, shingled water tower, opposite, might have been the result of a visit to Rhode Island by William Beckford, Horace Walpole, Ludwig of Bavaria, or all three.





EARL'S COURT WATER TOWER, NARRAGANSETT PIER, R. I. 1510

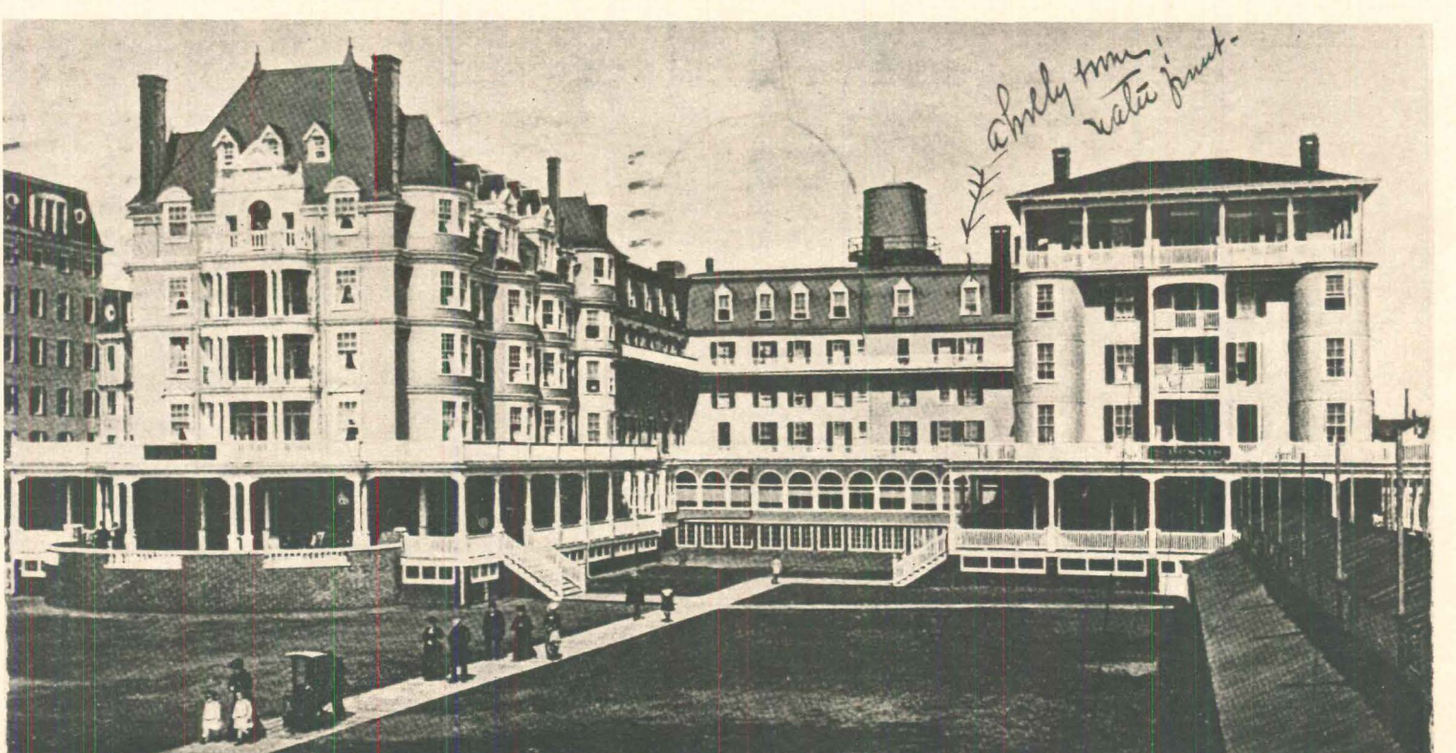
Too bad. but you would not come see what you missed



Cliff House, Beach and Seal Rocks, showing Holiday Crowd on Beach, San Francisco.

Tuesdays trip. Disappointed L. L. C.

These mementos were mailed in 1909 and 1906, most certainly by a pair of white flannel trousers in each instance. The scenes may be called sub-Henry James; the ethos, vintage McKinley—T.R.—Taft.



HOTEL DENNIS, ATLANTIC CITY.

April 30 - 1906 - Dearest Mother - We have had a lovely trip down - so easy - & a nap this afternoon & a warm shower makes me feel more rested already - only if I could have all my precious ones at home tonight - St. Louis Sat night

This third in a series of articles on urban renewal suggests that short-run considerations of financing and land prices are obscuring the long-run opportunities in redevelopment. BY DAVID B. CARLSON

THE UNREALIZED PROFITS IN URBAN RENEWAL

No element of the complex urban renewal procedure has caused so much delay, waste, and controversy as the uneasy partnership between private enterprise and public bodies in the rebuilding of slum land.

No one disputes the need for such a partnership, for without private capital and talent, cities would stand little chance of recovering any part of their land from the forces of blight and deterioration. The Housing Act of 1949, which established slum clearance and reconstruction as a federal policy, said "private enterprise shall be encouraged to serve as large a part of the total need as it can." More recently, President Kennedy added that "to the extent possible, we want to attain urban renewal goals by helping the private market . . . work more effectively."

But now, over a dozen years after Title I became law, many aspects of the public-private partnership need serious rethinking. Both cities and redevelopers have, in too many instances, overlooked fundamental factors in that partnership. For instance:

- Cities have often pressed for the highest price for redevelopment land; and to get it, they have been slipshod about their initial objectives, particularly of density and land use, and ignored esthetic consideration altogether. A result has been projects of questionable value to the health of the city, and sometimes an outright collapse of a project because of the inability of poorly qualified sponsors—who happened to be high bidders—to finish the work.
- Redevelopers have become so preoccupied with the formula for building new housing under FHA's Section 220 that they have often ignored basic market conditions, and the importance of supporting public facilities. The result has been a number of sour projects stretching from coast to coast.

Who wants to build in the slums?

One of the fundamental sources of friction between private and public enterprise in urban redevelopment is that the private market is not attracted to slum areas, particularly when it comes to building new housing or commercial facilities. This is precisely why the federal government stepped in, and concocted a fistful of incentives to induce entrepreneurs to devote their energies—and capital—to rebuilding blighted areas. In addition to large parcels of cleared land at written-down prices, there are liberal, federally insured mortgages for housing as well as other incentives.

The federal government and cities started by having to coax reluctant developers into the program. For nearly ten years, the only active developers were nationwide operators who seemed as interested in personal prestige as in profits—for which the whole program can be thankful.

Although many cities are still having trouble attracting private money to their deteriorated areas, the picture has now changed considerably. Most importantly, a majority of projects is going to local redevelopers. And the nationwide operators remain active: 11 of the nation's leading builders actively competed for a California renewal area, in a struggle marked by such bitterness that it is hard to realize the site was once a blighted area. And, in several large cities, local officials are being approached by potential redevelopers who want them to declare a given area blighted so they can rebuild it. In other cities, such as Cleveland, Pittsburgh, and Buffalo, pools of private investment capital have been established for renewal (FORUM, Feb. '61). The upshot of this activity is that at current rates, private enterprise will eventually invest at least $5 for every $1 spent by the federal government, or about $20 billion.

What is "highest and best?"

The city's fundamental role in the private-public partnership is to acquire, clear, and resell slum land for redevelopment "at its highest and best use." That use is theoretically determined by real-estate appraisers and planners, in the light both of tax potential and of city needs for private facilities. The key is the assembly of land parcels near the central city: without the use of public powers for such assembly, it would be impossible for private builders to operate in blighted areas, even if they were so inclined.

The highest and best use is generally defined as "that use of land which may reasonably be expected to produce the maximum net return to the land over a given period of time." This is a shortsighted view, according to planners, who may prefer a land use keyed more closely to social objectives, whether these be to create a park or a community center. However, the "highest and best use" is frequently scaled down to meet the realities of the real-estate situation; for some cities find themselves with land on their hands, unable to find buyers willing to build anything at all in the area.

How to dispose of land

Land disposition lies at the heart of much of urban renewal's difficulties. As Urban Renewal Administration Commissioner William L. Slayton says, urban renewal is too often viewed "in a limited way as a means of making slum or blighted land available for development—rather than using such slum or blighted areas as a means of achieving the community's stated objectives."

This is true partly because land disposition is usually such a lengthy process that by the time the land is finally acquired and cleared, cities are under great political pressure to sell it as quickly as possible.

The average time for getting an urban renewal project into the execution stage is about two years. A recent study of California projects showed that it takes about another three years before the land is finally sold to private developers: the time lag involved in planning and processing is still a major renewal bottleneck. Thus a city which has been involved in getting land cleared and sold

for five years or more is understandably eager to have private builders get started and to garner the higher taxes such projects inevitably produce.

The city can make land cleared under renewal procedure available in several ways. Usually, the city either sells land under a sealed bid procedure or for a negotiated bid. Many redevelopers prefer the latter because they feel that it gives them a better chance to present and explain fully their proposal. But the negotiated bid has led to great controversy. In New York City, for instance, a major scandal erupted three years ago over Robert Moses's, then urban renewal boss, system of sponsor preselection. Some sponsors who were hardly qualified builders got slum areas before clearance and milked properties without relocating tenants or building the apartments called for in the plan. Despite this scandal —and the departure of Moses— New York remains the only city which sells slum properties, leaving relocation and clearance up to the redevelopers.

What price esthetics?

In the big, glamorous renewal developments sponsored by nationwide builder-investors, design has generally been good. But in many more cases, esthetics are pushed out the window by the hard economics of land prices and building costs. Cities too often are looking only for the top bid for land, and the highest possible tax yield, without much attention to design and amenities. Seldom has a project been awarded primarily according to design criteria.

Last fall, for example, many of the leading redevelopers in the nation were sorely disappointed by the actions of the Santa Monica, Calif., Redevelopment Authority, which was purportedly seeking top designs for an ocean-front renewal site. While design was to be a foremost consideration, the authority took sealed bids for the land, and then brazenly asked the top four bidders to bid against one another in what was, in effect, an auction. This completely vitiated the city's earlier statements to the effect that design would be an overriding concern (FORUM, Nov. '61).

One large redeveloper involved in the Santa Monica mess says frankly, "We will not get involved in another competition based on design." The reason: his firm spent over $50,000 for design, then found that the city was only interested in getting the highest price. "We should have saved ourselves the trouble of getting a first-rate design," the developer says, "and just given them our top price."

So far, there have been few land sales based primarily on esthetic considerations. One problem is the reluctance of developers to participate despite some success with this method in San Francisco, Philadelphia, and Washington. One well-known urban renewal observer thinks that at least 25 per cent of all land sales should be based upon design criteria. (He is too realistic to hope for more.) But many city officials feel that it is enough that they place certain controls on the land, and let the developer pick his own design. "As long as he

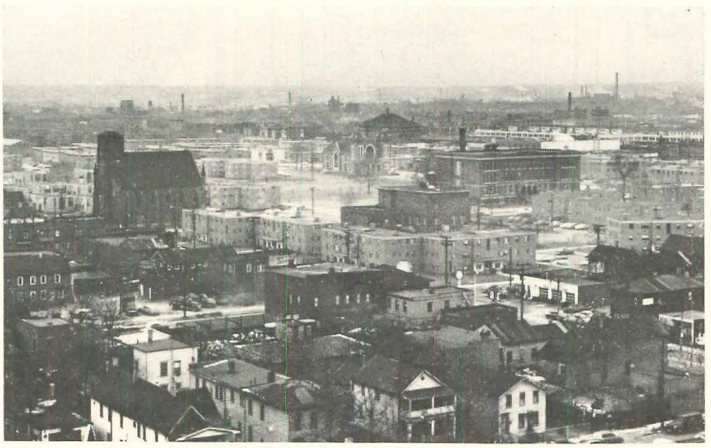
CAPITOL AIRVIEW



HOW TO SUCCEED IN RENEWAL

One of the hardest lessons to learn in redevelopment is one that was enunciated early in the game: projects must be able to create a new urban environment. Washington's Southwest Area (shown left) is such an effort, and it is in many respects the most successful in the nation. It is large (about 550 acres), has a mix of uses (283 acres residential, 35 acres industrial, and 53 acres for supporting commercial facilities), and new government office buildings will be nearby. Already finished or near completion are: the Arena Stage Theater by Architect Harry Weese (center foreground) and immediately behind it four high-rise towers and a shopping center by I. M. Pei. To the left, behind the new Amidon elementary school are Capitol Park apartments and townhouses by Satterlee & Smith. To the right are high-rise apartments and barrel-vaulted townhouses, designed for the Reynolds Aluminum Service Corp. by Architect Charles Goodman.

COURTESY HOUSE & HOME



Cleveland's Longwood project is in financial trouble, precisely because it lacks many of the ingredients for success found in Washington.

Longwood is still mired in slums, and redevelopers are now seeking refinancing aid from the federal government and a local foundation.

conforms to the overall plan and whatever amenities this might call for, the developer should have as free a hand as possible in selecting an architect," says one redevelopment agency head. And, he adds, "Where there have been design competitions, the builder generally tries to get the architect to cut down the cost of his buildings once the job has been won. These cases always wind up in an uneasy compromise."

At the heart of the design problem is land price—cities seem to feel that land sales based on design considerations result in lower land prices, and for that reason seem unwilling to dispose of land this way. The result of that particular shortsightedness has been a stack of urban renewal projects which fall so far short of the public's expectations that they, in themselves, become symbols of all the public is coming to disdain in renewal. It should be obvious that something better is needed, in terms of a final product, to compensate for the dislocation and expense of the process. No matter what some planners might say, the public seems unwilling to admit that just clearing the slums is in itself enough.

Why the write down?

The determination of most cities to get maximum prices—and potentially high tax yields—for renewal land has obscured the real purpose of the federal subsidy, according to some critics. The federal government pays two-thirds of the difference in the cost of acquiring and clearing slum property and the price at which it can then be resold. Thus the write down itself has become the focus in the public balance sheet, and according to some critics, wrongly so. Economist Louis Winnick is one of these: "The emphasis on land write down is unwarranted and has resulted in mistaken policies," says Winnick. "The success of private redevelopment hinges not on land write down but on the rent (or price) per unit of space in the new improvement . . . the real objective of government aid is to bring down the rent of new private real estate to its market level."

In these terms, renewal seems something of a failure. Too rarely has a renewal project resulted in low rentals, compared with what is available in the private market. At the moment, this is one of the key worries of federal urban renewal and housing officials. FHA Commissioner Neal Hardy says that "you cannot keep doing urban renewal at $60 per room . . . there is simply too thin a market in most cities for it." In New York City, three projects are being restudied because the rentals would have been too high. And a major factor in high-rent apartments on renewal sites is simply the price of land. As one developer says, "Land cost is so high that a developer just can't get the per unit profit he needs. . . ."

Redevelopers often find themselves squeezed by the price they have had to pay for land, and the amounts FHA will allow them on Section 220 mortgages. FHA, with a coldly realistic eye to the market for new rental units in the area (and generally cynical about future prospects) often will not insure mortgage amounts high enough to provide the developer with what he thinks are high enough rentals. Result: the developer cuts down on the quality of his buildings and improvements (within the limits of the plan) and is forced to play the "room-count" game. This way he can, by using the complicated FHA room-count formula (so much dollar allowance per room, as rooms are defined by FHA) to squeeze four or five "FHA rooms" into a single one-bedroom unit. Both the developer and FHA are fooling themselves, of course—they can call it five rooms for mortgage purposes, but when the potential tenant comes around, he knows precisely how many real rooms are in the unit, and he also knows whether its cost is too high compared with other apartments he has seen. Most tenants can count up to five.

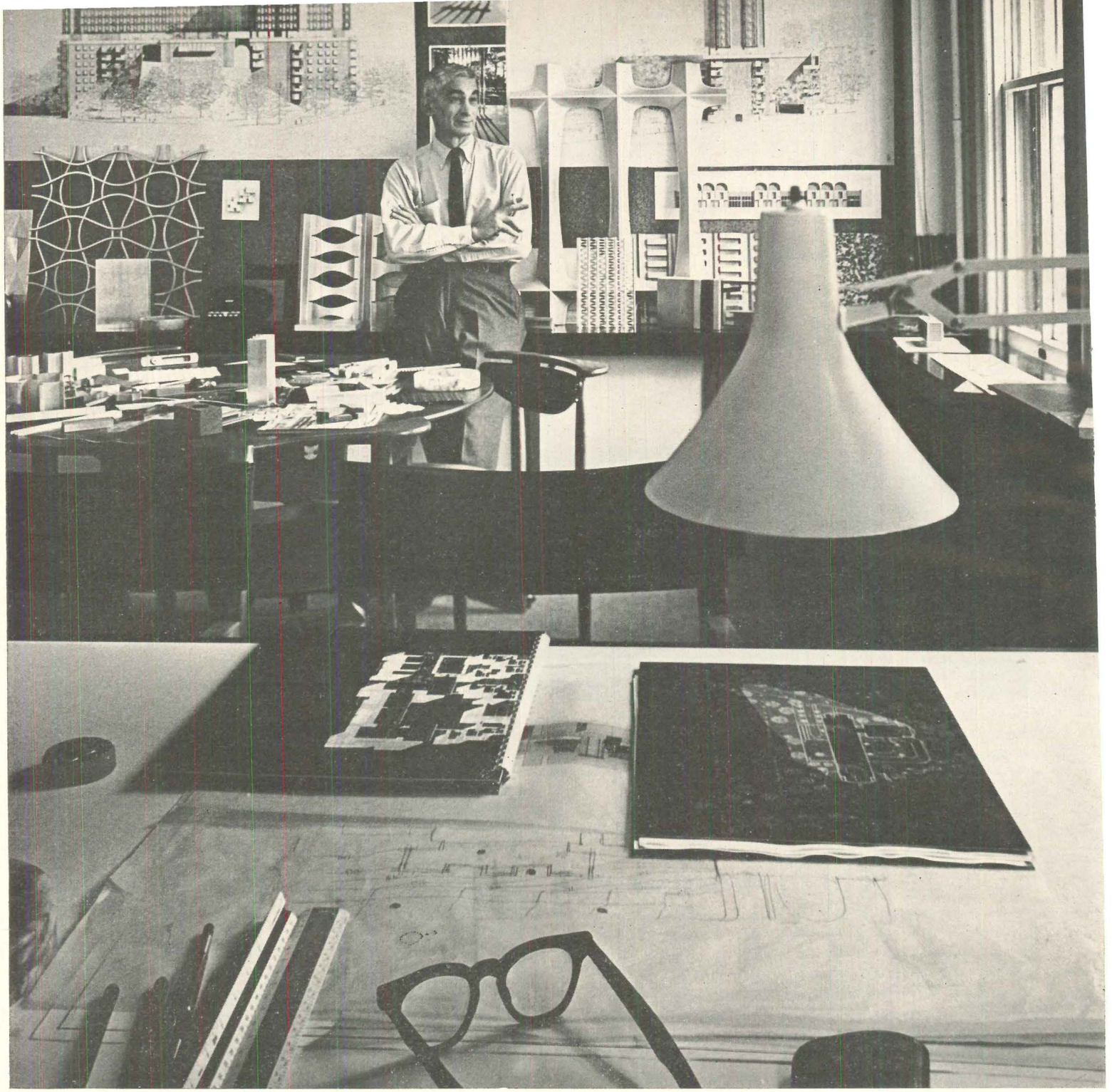
Where are the yachts?

This sort of tomfoolery is precisely what is wrong with much of renewal, and why redevelopers are so often disappointed in their ventures into slum reclamation. Perhaps the biggest paradox in all the urban renewal programs is the fact that federal lawmakers have devised a financing formula which is extremely attractive to private builders-investors; but the very attractiveness of that formula too often causes both entrepreneurs and local officials to overlook basic market considerations.

There has already been considerable publicity given to the "bonanza in blight" allegedly being mined by sharp-eyed urban renewal sponsors. The question is, to paraphrase an old Wall Street query, "Where are the redevelopers' yachts?" Lawyer B. T. Fitzpatrick, an experienced legal consultant for redevelopers, says flatly that "there are not very many redevelopers who have shown a profit in urban renewal yet."

And yet the formula for building housing on urban renewal land is, at least on paper, extremely lucrative. Basically, it works like this: the builder buys an urban renewal site for, say $1 million, and plans a $10 million apartment project. He gets a Section 220, FHA-insured mortgage for something around $10.8 million (90 per cent of replacement value of land and buildings, plus a 10 per cent builder's profit). This leaves him with only $200,000 of his own capital in the project. And the potential for gains on this small equity investment is tre-

continued on page 160

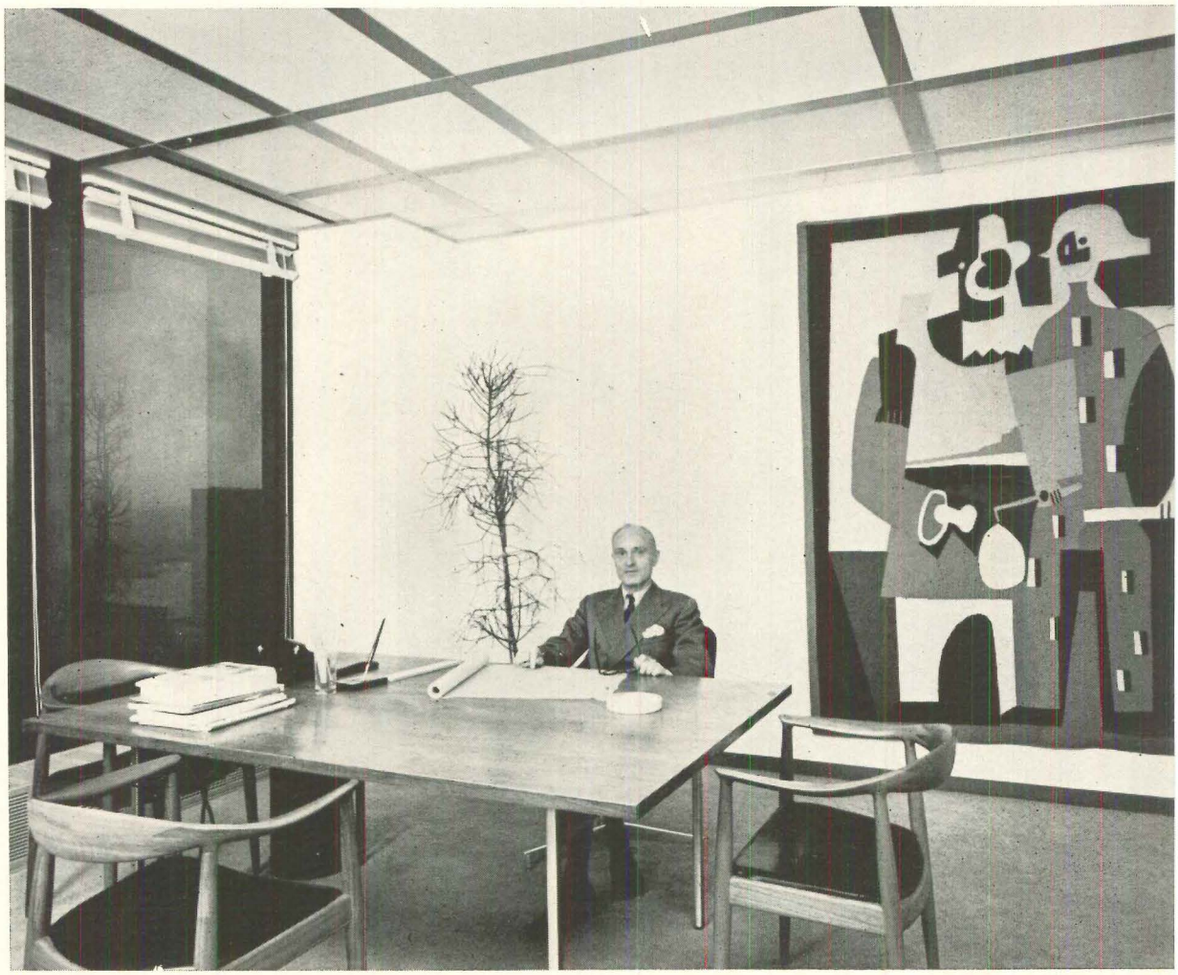


ROBERT C. LAUTMAN

WHEN THE DESIGNERS DESIGN FOR THEMSELVES

Almost everyone who reads this magazine works in an office —and some who read FORUM work in an office of their own design. Here are shown the offices of nine U.S. architects and designers—and each of these offices reflects the special tastes and interests of its occupant: Charles Goodman (above) is an inveterate collector of samples of building products; his Washington, D.C., office looks like a big squirrel's nest. Philip Johnson (top, right) is an inveterate collector of modern art; his elegant New York office looks like a museum. For more on office design—and designers—see the next five pages.

DMITRI KESSEL—LIFE



CHARLES GOODMAN'S office (left) is on the second floor of a house he remodeled in Washington, two blocks from the White House. The clutter is intentional: Architect Goodman is something of an evangelist in product design, and he has amassed a collection of items he likes and hopes to use sometime, many not originally intended for the building industry at all. He likes to keep these samples handy to show clients what he means by good design and how it contributes to the overall appearance of a building. Behind Goodman are renderings of a current project in Washington and full-scale samples of sun screens for another. The drafting table and cabinets are Goodman designs.

PHILIP JOHNSON (right) works in what is surely one of the most beautiful buildings in America: the Seagram, which he helped design. The East Side of Manhattan fills one wall with a spectacular floor-to-ceiling view. The rest of the room, however, is Johnson's. A Picasso tapestry glows from the wall behind him, the only brilliant color in an otherwise subdued scheme. The only furniture in the room is a teak table on metal legs, used as a desk; three teak chairs by Hans Wegner, cushioned in black leather; and a swivel chair. On almost any day of the week, Architect Johnson (a trustee of the Museum of Modern Art) may add a new painting or sculpture to his office collection.

LEONARD NADEL



WELTON BECKET (right) heads the biggest architectural firm in the U.S. and directs the work of several branch offices around the country. It is hardly surprising, therefore, that his is the most solidly "executive" office in the lot. By operating a special console built into the custom-designed desk in his Los Angeles headquarters, Becket keeps an eye on the drafting room over closed-circuit TV, opens and closes curtains and doors, and tunes a hi-fi system. The checkerboard pattern of photographs on the wall to his right displays the firm's major past and current projects.



ERNEST BRAUN

EDWARD C. BASSETT (left), a partner in Skidmore, Owings & Merrill's San Francisco office, normally works on the other side of this marble-topped table, looking across Treasure Island to the Bay Bridge. SOM occupies the fifteenth floor of the Crown Zellerbach building, which it designed in collaboration with Hertzka & Knowles. SOM, of course, planned its own interiors. A study model of a resort hotel in Hawaii covers most of Bassett's table, and a site plan of the same project is propped up near the windows. Bassett sits in a Wegner chair of oak and rattan; the sofa was custom-made to fit flush with the window-sill convector top. Above his head are two squares of the modular ceiling, which combines air supply with the lighting fixtures.

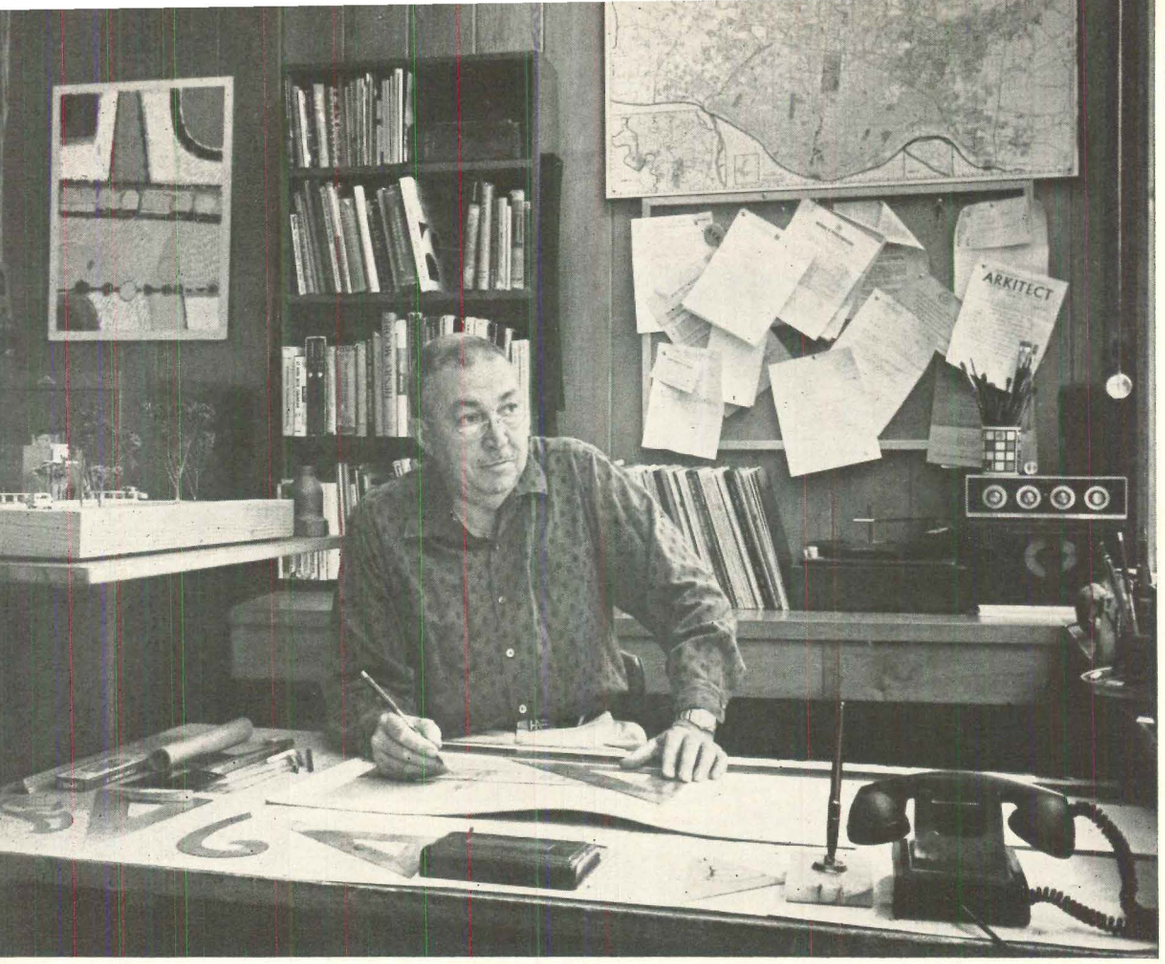


BRUCE GOFF (right) is the only architect shown on these pages who lives and works in another architect's building—and, furthermore, enjoys it. Goff's quarters are on the ninth and tenth floors of the late Frank Lloyd Wright's Price Tower in Bartlesville, Okla., and Goff's office is a balcony off the master bedroom. All the furniture was designed by Wright and built in, except for the chair. A frieze of Goff's work hangs inside the curtain, updated with new work as it appears. The cat's name is Chia, for Chiaroscuro.

DMITRI KESSEL—LIFE



RAYMOND LOEWY (right), the industrial designer who has changed the shape of everything from soap to automobiles, designed this private office for himself in the Park Avenue building where the firm of Raymond Loewy / William Snaith Inc. has its corporate offices. Almost everything visible in the photograph is a Loewy design except the antique eagle over his shoulder, a fish mobile (by Jay Doblin), and two armchairs, which are Italian imports. Loewy's desk is a curved slab of ebonized walnut, the edge trimmed in gold leaf; the leather swivel chair and the abstract rug are also his designs. The wall behind him is wormy chestnut in random-width planks, rubbed to a soft finish.



ART FILLMORE

HARRIS ARMSTRONG (left) leaves his house in the morning, strolls down a flagstone path, and enters his office, a commute that takes about 60 seconds, portal to portal. Architect Armstrong's office, which he built in 1950 (FORUM, May '50), is a little pavilion at the edge of a pond on the same property with his house, in suburban Kirkwood, Mo. In the ordinary sense, he has no private office—just a corner of the drafting room. Behind him, on a wall festooned with papers and drawings, are a study for a library mural and a large map of St. Louis County.



DON CRAVENS

CRAIG ELLWOOD'S office (left, below) is in the small office building he designed for the Carson/Roberts advertising agency in Los Angeles (FORUM, Sept. '61). Although it looks formal, Ellwood is eager to point out how informal it really is. "Yesterday we closed the office at noon to go to an art gallery," he says, and he likes to take his staff (two men, one girl) to the beach when work is not too pressing or (sometimes) when it is. His office has white walls, a white carpet out to the black marble tiles around the perimeter, black leather chairs, a slate table on metal legs, and a 6-foot tree on the balcony outside.

GEORGE NELSON (right), whose desks, office chairs, and storage systems have given a sleek corporate look to many American offices, manages to get along fine without any of them. He works at one end of a tiny room (10 by 14 feet) facing St. Patrick's Cathedral in New York City, sitting on the floor or a low couch. His "desk" is a bentwood chair (his own design) just big enough to hold an ashtray, matches, paper, and pencils. Two low tables and a shelf with a small cabinet underneath are all that he uses for a storage system. When this photograph was taken, the cork wall contained, among other things, a Whitney Darrow cartoon, two paper hands from Finnair saying "occupied" in four languages, a place mat with a picture of a lobster printed on it, an earring, and a monetary motto for 1960, "Mach Gelt."



GEORGE CSERNA

NOW ARCHITECTURE HAS A NEW CLIENT

BY DOUGLAS HASKELL

The architects of America want to move forward. So far, they don't know how. The "forward" movement which they seek is not only in design or in technics. Right now it is their position relative to their clients that worries them, their position relative to the community, and, in a sense, to their income. This is what came out of Dallas recently, when the architects devoted their annual convention to the theme of "The Architects' Expanded Services."

Out of some confusion there emerged five useful ideas:

1. The architect faces an entirely new kind of enterpriser. He is of later vintage than the corporate client, and tougher.
2. Out of this enterpriser, or "entrepreneur," the architect must somehow shape a client. This too is tougher—tougher than shaping a building for a client who already is one.
3. The architect also faces a situation in which his traditional area of work—planning, design, and supervision—may represent an ever-diminishing factor in the total product.
4. Expanded knowledge and expanded services may therefore be in no sense an "extra" but only the fortification of the job.
5. The architect's biggest problem may lie in his own bailiwick. Can he "expand" his services without compromising his art and his ways of getting things done?

THE THIRD FORCE: NEW METHODS IN FINANCING

The new entrepreneur, or promoter, is the part that modern architecture missed, in its picture of industrialism. Years ago, beginning perhaps with the Chicago Tribune competition of the 1920s, the belated realization had come to the profession that the world was industrial.

But the realization was applied, primarily, to the world of design and technics. Design made the new world noble while building technology helped it to develop. Yet, meanwhile, such a new productive world had every bit as much need for new financing and new business methods to carry out its vast expansion; and it invented them with an ingenuity that almost matched its technological invention.

Much has been said about the way in which architecture could handle one of these new business manifestations, the so-called "corporate client." Periodical literature has been filled with stories of buildings like Chase, Seagram, or Johnson's Wax, although, noteworthily, these all still involved a great *individual* client: Rockefeller, or Bronfman, or Johnson.

Almost nothing has been said, except by FORUM, concerning a great parallel manifestation in the field of building. This is the emergence of the entrepreneur, the builder who creates not for his own use but for others.

THE MANAGERIAL CLIENT

In one or two contexts, he has of course become quite thoroughly familiar. As a home builder he creates hundreds of houses at a throw, replacing the little carpenter and his family who managed every year to produce—and sell—a house or two. In that one field of home building, architects have realized indeed that they face a new kind of problem.

But the American home builder is only one example of a type which is developing in many contexts. Matching the home builder in the field of big buildings is the so-called entrepreneur, who displays his talents most clearly in erecting office buildings: he is a veritable canner of office space. And now there are other entrepreneurs who build, complete, such things as banks and industrial plants.

What is the one denominator common to all these new kinds of builders? Negatively speaking, it is, surely, that each is neither the occupant of what he builds nor (except for short periods and with limited intent) its owner. He is, instead, an "arranger"—and he is paid for being one. First he brings together the land, the leases to prospective occupants, the materials, the design, the constructor; then he assembles the financing.

MONEY IS A TOOL

It is in the financing, more than anything else, that the new entrepreneur differs from architecture's traditional patron, whether corporate or individual; for the entrepreneur works almost entirely with *other people's money*. If possible he will get not only what the installment-credit people call "100 per cent financing" but he may try even higher.

He does not necessarily have the pride of the old-fashioned owner in his building, for, except as a courtesy, he cannot be called an owner. He lives not on the property but on rights vested in it. In the realm of law there was once a famous chapter written by Dean Pound of Harvard, entitled "From Status to Contract." At less majestic scale, in the realm of real estate, the transition is going on "From Owner to Entrepreneur." And already there has been added, "From Entrepreneur to Government Clerk."

These, then, are the arrangers who today float building operations on vast pools of other people's money. Actually it makes little difference to architecture whether the label on the pool is "private enterprise" or "government," and whether the money itself is called deposits or taxes. In either case the power that is exercised is power without ownership.

Over the "tax" pool there presides a swarm of government clerks. The most familiar ones are those of the FHA, "processing" everything from a good one-third of the nation's houses to literally hundreds of urban renewal regulations, representing billions of dollars per annum. It is all done in one great heap, and intrinsic to it is a certain ignorance of, even a disdain for, architecture. Unless their rules are effectively challenged, these fellows *are* the architects.

Into the other pool, labeled "deposits," there dips the hand

of the entrepreneur. As an arranger he presides over a vast structure of his own, a veritable skyscraper architecture of liens and leases, leasebacks and mortgages, carried out as the case may be through syndications, cooperatives, condominiums, real-estate trusts; carried out by "sales" of land without the sale of the building thereon, and vice versa, and all sorts of other Alice-in-Wonderland miracles.

Just how such operators can get rich enough to endow universities (complaining all the while that their "tight rentals" make it impossible for them to use any but the cheapest architecture) is difficult for the artist in architecture to grasp. The manipulation of depreciation accounts alone, and the "swapping" of partially depreciated properties for tax advantage, are enough to leave him gasping.

INFLUENCING NONOWNERS

Most architects who are exclusively interested in their art are completely baffled by these manipulations; and so they just sit back, gnash their teeth, or join in protest meetings against the growing uglification of America.

The act of genius in coping with the new situation has been achieved by very few architects. These very few have undertaken something which, had they realized it, meant nothing less than *"creating their new client"*—and creating him out of the new kind of building operator.

Architect Ieoh Ming Pei was "one of the first to declare that the job of our times is to see what can be done in buildings put up by speculative builders." This led him to his long and architecturally productive association with William Zeckendorf (who is, of course, much the most esthetically inclined of the entrepreneurs).

It was in this connection that the Dallas AIA convention's theme came upon the architect's need for "expanded knowledge." For, manifestly, any appeal for higher quality by the architect in this new situation must be based upon arguments other than those that would sway a corporate client or individual owner.

Fulcrum points are what the architect seeks who wants to influence the nonowner man of power, be it the FHA examiner, the home builder, or the entrepreneur. To know where the men's profits really lie, how big they are, how certain changes can affect them, the architect needs indeed to have a running acquaintance with the new politics and economics.

Never can the architect know *more* than the experienced realtor about real estate or more about shopping than a merchant. Yet, as Pei has said, he can learn *where to dig in,* when he wants to do (or sees the chance to do) something special. As William Pereira told the Dallas convention, the architect, if he is really to be one, has to be more than a little of an entrepreneur himself —in the sense of being one who "stands in the middle." And he must try to do some arranging in behalf of Apollo as well.

"EXPANDED SERVICES" AND EXPANDED KNOWLEDGE

The greatest mistake that some members of the profession seemed to be making as they listened to panels at Dallas was to assume that "expanded services" by the architect would involve merely a piece of "moonshining," so to speak, with the intent of filling the architect's coffers. Nothing could be more fatal to the profession; for another major development that industrialism brought about (in addition to the shift from "ownership" to "control") is the ever-growing *surround* of the traditional building job.

In homely terms the growth of surround for the individual building can be expressed this way. Back in 1900, the cost of a building shell—foundation, walls, and roof, might have represented 80 per cent of the construction cost, and the construction cost represented perhaps 80 per cent of the total enterprise. It was in shaping and decorating that shell that the architect performed his service and earned his income. Now, however, the shell may represent only 30 to 40 per cent of the construction cost, because of the vast multiplication of mechanical and other services, and the construction cost, in turn, may represent only 30 to 40 per cent of the total enterprise. For it is not absurd to consider the shell as only 30 to 40 per cent, if one realizes the vast extent of some of today's land "write downs" and the cost of surrounding "arrangements." In the light of these figures, what has become of the architect's relative importance to the undertaking? And what, for that matter, has become of his income?

All this deals merely with methods of operating so the architect can make himself *effective.* It says nothing about whether his work is good or not. His greatest problem may well be in his own bailiwick, making sure that all the mechanisms needed in order to expand his services and control shall not interfere with his attention to the most important matters. At Dallas it was FORUM's Jane Jacobs who gave out the most resounding warning. She expressed the fear that, especially in dealing with the nonowner controllers who reside in government, architects might get so sidetracked as to lose sight of all their high initial purposes—whether of design or of social good. And yet, what Mrs. Jacobs left out, as she described the need for an architect-artist who should also deeply study deeper functions, was the description of her very own operations. Agree with her or not, Mrs. Jacobs has been most effective; and this is because she has known every trick of practical politics: the art of every bit of it down to ward heeling and one might almost say street fighting. It is for this reason, one surmises, and this alone, that those in power were *not* able to ignore Mrs. Jacobs and her associates in Manhattan's "West Village."

So, despite the reluctance on the part of the "design architect" who feels that he alone is in command of the great art, the profession must study the mechanisms of power too, the means of being effective. The old fellows had it, in ways that have been forgotten. END

Above is Hanover's Kestner Museum before remodeling. Below, its new envelope adds only 30 per cent to land area but 115 per cent to interior.

FACE LIFT FOR MUSEUM

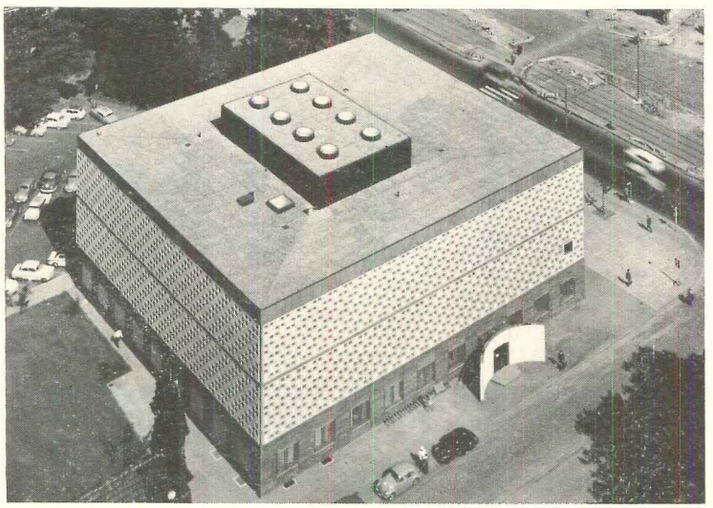
Tourists passing through Hanover, West Germany, this summer may be thoroughly confused to read in their guidebooks that the Kestner Museum of arts and crafts was built in 1889 in Italian Renaissance style. As it stands today, remodeled by Architect Werner Dierschke and Engineer R. Wildometz, no one would believe it—at least not until they step inside.

The architect has taken the old museum, virtually intact, and completely wrapped it in a perforated concrete grille. The new curtain wall clings closely to the old walls on the east and west sides, but spreads out on the north and south to increase the museum's space by 115 per cent. The need for this new space was the primary reason for rebuilding (although the museum was badly damaged in World War II and had been only partially reconstructed in 1948). The original portico has been preserved inside and part of the third floor omitted around it to show the full height of the old columns (see photo below, right).

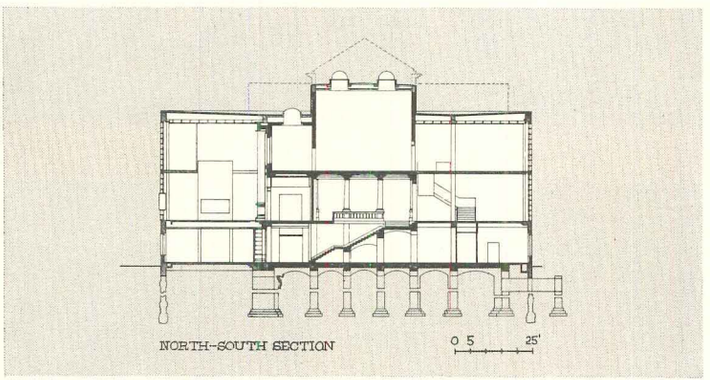
The grille is a neat solution to the problem of lighting the three-story building. Because it provides even, natural light for the exterior galleries, the architect was able to flatten the roof and replace the old domed skylight with smaller plastic bubbles to illuminate interior rooms. The grille itself is made up of 21-inch squares 10 inches deep which screen out most of the direct sun and sky glare. Translucent glass is used in most of the squares but larger sections of transparent glass are substituted in some areas where display cases are set into the grille. Additional wall space for exhibits can be created by blocking out the grille with curtains or screens.

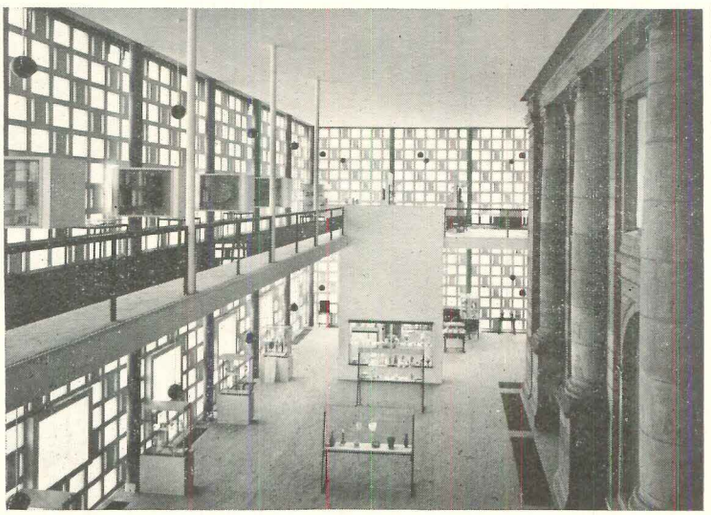
The museum houses a collection chronicling the development of arts and crafts from ancient cultures through the early Christian period, with some additional exhibits of Medieval, Renaissance, and contemporary pottery and glass. The ground floor is devoted largely to administrative offices and storage space. A gallery on the north side of the first floor is used for temporary exhibitions. The permanent collection is on the second and third floors and is reached by a large central stairway. In remodeling the roof, the architect reduced the monumental height of the main room on the top floor by lopping six feet off the old domed skylight.

In retaining the old neoclassic supporting columns and balustrades inside, the architect has at least preserved a reminder of the building's past. But, the somewhat inert modern box which hides the old museum would seem to lack much of the presence of the original. And since the portico was preserved as a relic, it is regrettable that the architect chose to decapitate it by eliminating the pediment atop the columns.



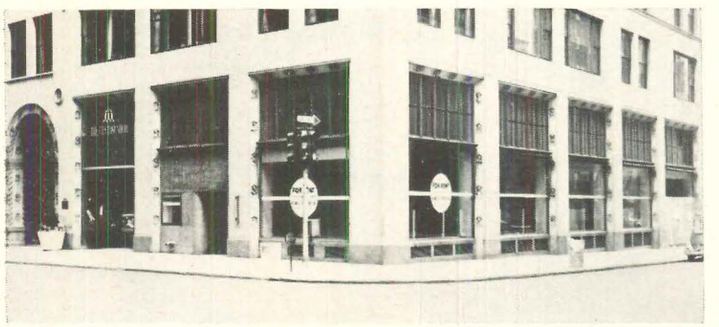
Air view of rebuilt museum shows bubble skylights and entrance screen





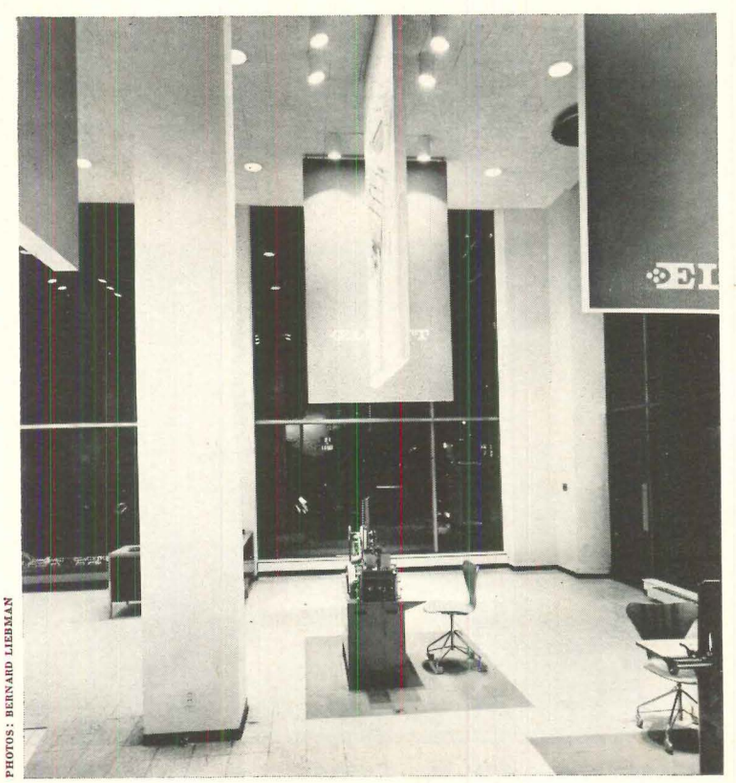
PHOTOS: HANS WAGNER

Old façade, retained inside, is encompassed by a new mezzanine balcony



Manhattan showroom before remodeling (above) and after (below)





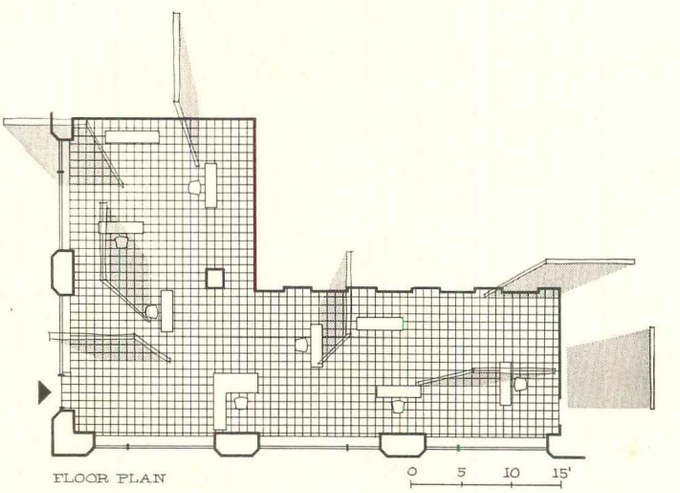
PHOTOS: BERNARD LIEBMAN

SETTING FOR MACHINES

When Elliott Industries, Inc. restyled its addressing-machine equipment not long ago, it also decided on a modern showroom in which to display the new designs. The location chosen was 281 Madison Avenue in midtown Manhattan, the former offices of a real-estate broker on the ground floor of a 37-year-old building (photo left).

To remodel the dingy, old-fashioned space into a dramatic setting for the new equipment, Elliott called in The Space Design Group, Inc. Although the budget was fairly small (final cost: $41,800), the designers—Director Marvin B. Affrime, Associate Designer Frank R. Failla, and Associate Project Coordinator Carl Yoder—were given virtually a free hand to put the money where they liked.

Space Design decided that the L-shaped showroom was the first order of business. (The client agreed to save service and storage space, conference rooms and offices for a future remodeling program.) The designers first opened up the showroom with a new glass and bronze façade and then created an interior of great simplicity as a background for the client's product. Each unit of machinery is anchored visually by a pad of blue vinyl tiles. An interior balcony was eliminated and normal exterior signs were replaced by interior floating panels in shades of blue and purple with Elliott's new logotype on one side and outsized photographs on the other (photo right). The panels are illuminated by floodlights hung from the 18-foot ceiling. For a total cost of only $790, they subdivide the space without obstructing it, and at the same time dramatize the height of the room. Except for the tan and gray machinery, the only other use of color is in staggered yellow wall panels.




ECONOMICAL WITH SPACE
EASY TO FILE

SIGFRIED GIEDION ON "PLAYBOY ARCHITECTURE"

Some time this summer, the thirteenth printing of Dr. Giedion's famous Space, Time and Architecture *will appear in bookstores all over the U.S. No book has been more influential in establishing the basic philosophy of modern architecture: since it first appeared in March of 1941, some 50,000 copies have been bought by architects and students.*

For this new, thirteenth printing, Dr. Giedion has written a special introduction entitled "Architecture in the 1960s: Hopes and Fears." The following is a condensation of that introduction, published in FORUM *for the first time with Dr. Giedion's permission.*—ED.

At the moment a certain confusion exists in contemporary architecture, as in painting; a kind of pause, even a kind of exhaustion. Everyone is aware of it. Fatigue is normally accompanied by uncertainty, what to do and where to go. Fatigue is the mother of indecision, opening the door to escapism, to superficialities of all kinds. . . .

Contemporary architecture is regarded by some as a fashion and—as an American architect expressed it—many designers who had adopted the fashionable aspects of the "International Style," now found the fashion had worn thin and were engaged in a romantic orgy. . . . By 1960 its results could be seen everywhere: in small-breasted, gothic-styled colleges, in a lacework of glittering details inside and outside, in the toothpick stilts and assembly of isolated buildings of the largest cultural center.

A kind of playboy architecture is *en vogue*: an architecture treated as playboys treat life, jumping from one sensation to another and quickly bored with everything. . . .

We are amidst the formation period of a new tradition, which is still at its beginning. There is a word we should refrain from using to describe contemporary architecture. This is the word "style." The moment we fence architecture within a notion of "style," we open the door to a formalistic approach. The contemporary movement is not a "style" in the nineteenth-century meaning of form characterization. It is an approach to the life that slumbers unconsciously within all of us. . . .

SIGNS OF AN EVOLVING TRADITION

An easy pandering to popular taste in architecture has been tried several times since the optical revolution around 1910. These trends came and went. And the playboy attitude of 1960 will vanish too. There are definite signs that the process of developing a new tradition is continuing in spite of temporary disturbances.

A period terrified that mankind may destroy itself at any moment is simultaneously impelled by a frantic desire to found new cities such as has not occurred since the thirteenth century. . . .

The directions in which architecture will develop have become increasingly clear during the last 15 years: strengthening of its plastic tendencies and strengthening of conditions for its further evolution.

There is universal agreement that the values lost to our period must be restored: the human scale, the rights of the individual, the most primitive security of movement within the city. Behind this desire stands the unchanging constancy of human life which demands fulfillment. In earlier periods it was relatively simple to create settlements in which man was not too far removed from his need for contact with the soil. Today nothing is harder than to fulfill the simplest needs of life. . . .

DIFFERENT APPROACHES TO THE PAST

We have always regarded the past as something not dead but an integral part of existence, coming to understand more and more the wisdom of the Bergsonian saying that the past gnaws incessantly into the future.

It all depends on how one approaches the past. One way is to regard it as a useful dictionary from which one can select forms and shapes. The nineteenth century did this, using the past as a means of escape from its own time by masking itself with the shells of bygone periods.

The fashion of the 1960s is more refined. It only flirts with the past, nibbling at random details—pointed arches, renaissance porticoes, cupolas—giving them a surrealistic flavoring, so as to achieve a "poetic" expression.

The creative artists of this period have taken another way: poets, painters, sculptors, and architects alike. In their work, past, present, and future merge together as the indivisible wholeness of human destiny. . . .

This attitude toward the past emerges in the work of leading architects, not in the adoption of shapes but in the expression of inner affinities. In the monastery of La Tourette by Le Corbusier (1959), everything seems radically changed in formal expression: the customary placement of the cloister, the plastic thrust of the spire, and the church, which are all welded together with the building. Yet La Tourette was inspired by French monasteries of the thirteenth century. In it their spirit continues to live. . . .

The approach to the past only becomes creative when the

architect is able to enter into its inner meaning and content. It degenerates into a dangerous pastime when one is merely hunting for forms: playboy architecture. . . .

THE PRESENT STATE OF ARCHITECTURE

To recognize and evaluate what is happening today and where we now stand needs a longer perspective than the immediate historical past. It may be advisable to project the present happenings against the large screen of historical developments. We see them in the light of the prejudices we were born with. Among these is a belief that architectural space is synonymous with hollowed-out space, with interior space. This belief is based on the development of the last two thousand years. Since the days of Imperial Rome, the formation of interior space has been the major problem of the art of building. This experience of architectural space is so familiar that it requires a very considerable effort for us to become aware of its relative nature.

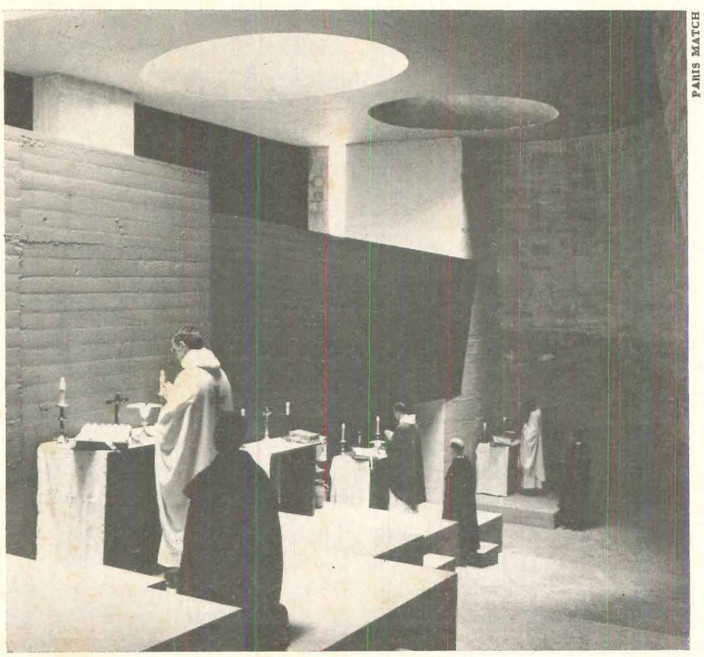
Today we are again becoming aware that shapes, surfaces, and planes serve not only to model interior space. They operate just as strongly, far beyond the confines of their actual measured dimensions, as constituent elements of volumes standing freely in the open. It is not just the size of the pyramids or the never-surpassed perfection of the Parthenon that is significant. It is the interaction between volumes which gives full orchestration to the first architectural space conception. . . .

In contemporary architecture I think the first planned relations of volumes in space can be found in Le Corbusier's project for the City Center of Saint Dié (1945). Here the different buildings are designed and placed in such a way that each emanates and fills its own spatial atmosphere and simultaneously each bears an intimate relationship with the whole. Today architects constantly face the task of placing volumes of different height and form in mutual relationship. But the talent to do this has become rare, maybe because the shaping of interior space has for so long been regarded as architecture's supreme task. . . .

It is easier to understand what is happening in architecture today when it is set into a wider frame of architectural reference. . . . There are three stages of architectural development. During the first stage—the first space conception—space was brought into being by the interplay between volumes. This stage encompassed the architecture of Egypt, Sumer, and Greece. Interior space was disregarded. During the second space conception, the formation of architectural space was synonymous with hollowed-out, interior space. Despite several profound differentiations, this second space conception encompassed the period from the Roman Pantheon to the end of the eighteenth century.

The nineteenth century forms an intermediary link. A spatial analysis of its buildings indicates that elements of all the different phases of the second stage are simultaneously intermingled. . . .

The third space conception set in with the optical revolution at the beginning of this century which abolished the single viewpoint of perspective. This had fundamental consequences for the conception of architecture and the urban scene. The space-emanating qualities of buildings could again be recognized, freed from the restrictive bounds of all barriers. There is an affinity with the first space conception. At the same time the supreme preoccupation of the second space conception—the hollowing out of interior space—is carried further. New elements are introduced: a hitherto unknown interpenetration of inner and outer space; an interpenetration of different levels above and below the earth, brought about by the effect of the automobile, which has forced the incorporation of movement as an inseparable element of architecture. These have resulted in the space conception of this period which forms the backbone for its evolving tradition. We are still passing through the convulsions of its formative years. Many detours can be expected. But the great lines have already been traced. END



PARIS MATCH

Above: "La Tourette was inspired by monasteries of the 13th century."

THE 100 BIGGEST BUILDING CLIENTS IN THE U. S.

Since FORUM last surveyed the field in 1959, some marked changes have taken place in the list of 100 firms who are the biggest corporate clients of the U.S. building industry.

Statistically, the 100 seem to be sharing an only slightly larger slice of a building pie that is almost twice as big. Where their counterparts accounted for $1.3 billion, or 20 per cent of the $6.5 billion in commercial, industrial, and utility building put in place in the U.S. during 1958, the top 100 last year built $1.4 billion worth, or 10.9 per cent, of a total of $12.8 billion. The increase amounted to a scant $100 million, or 7.7 per cent, compared to the overall rise of 96.9 per cent. Only 85 of 600 firms queried could report building outlays over $4 million in 1961. (Figures are in dollars current to each year, and exclude such nonbuilding installations as power and oil lines, railroad beds, and process equipment, as well as cost of land.)

Individually, however, some of the big, familiar companies show steady and even spectacular growth, and there are many interesting new arrivals on the list.

As in previous surveys, American Telephone & Telegraph Co. is far and away the leader, having spent $191 million in 1961 (85 per cent of it on buildings housing switching and transmission facilities, the rest in office and service structures), compared to $165 million in 1958. AT&T's total was nearly three times that of its runner-up (and subsidiary), Western Electric, which again held second place with an expenditure of $72,600,000, more than half of it in factory and production facilities. General Motors as before placed third with $69 million, and predicts it will spend 30 per cent more than that during 1962. (AT&T expects to increase its total annual outlay to $200 million this year, while Western Electric forecasts a drop of 37 per cent.)

Three big newcomers, and a radical change in rankings

Below the top three places, however, three years have produced virtually a brand-new list. There are 56 firms which did not appear on the last tabulation, and nearly all the others have changed rankings more or less radically. The three largest newcomers, all of whom place among the top ten, are in the retail and hotel fields. Loew's Theatres, Inc., headed by the brothers Tisch, embarked on a hotel, motel, and theatre building program that placed it fifth with an estimated $50 million put in place (including work done on New York's new Summit, Americana, and two intown motor hotels). Sears Roebuck, which did not report figures for 1958, placed seventh this time with slightly over $32 million, continuing a widespread store building and rebuilding program which Sears predicts will increase another 44 per cent in 1962. Similarly, Safeway Stores is building and remodeling roughly in a 4 to 1 ratio, and expects to exceed the $25 million it spent in 1961 by 53 per cent in 1962.

Compared to the previous 100 Biggest, there appear to be fewer major "one-shot" building customers whose entire expenditure, and resulting ranking, is attributable to a single large building that represents a once-in-a-lifetime investment. (Five of the top ten in 1958 were in this category, including such names as Rock-Time, Union Carbide, and Southland Life, who have since completed major headquarters and have vanished from the list.) There are some firms, on the other hand, which have moved up markedly due to special building programs whose tapering off is indicated in minus-figure forecasts for 1962 (e.g., Westinghouse, up from twenty-fourth to sixth place at $33,502,000, but estimating a 70 per cent decline for 1962; Minnesota Mining, up from fifty-ninth to eleventh place at $23 million, and predicting a 30 per cent drop; First National City Bank, up from seventy-ninth to fifteenth and expecting $18 million spent on new headquarters and branches to decrease 64 per cent this year).

What they are building

Many firms, though, show fairly constant expansion and are among building's steadiest customers. A glance at the breakdown of building types opposite shows companies with a variety of expenditures. Among the 63 firms who broke down their buildings by types, factory and other production facilities still accounted for the largest continuing share: $279 million, or 29.9 per cent of the total (down from 42 per cent in 1958). Office buildings, at $198 million, represented 21.2 per cent, virtually unchanged (from 22 per cent). Distribution facilities such as warehouses and retail stores accounted for $110 million, up from 9 to 11.8 per cent; research buildings and laboratories amounted to $94 million, up from 8 to 10.1 per cent. Miscellaneous "other" buildings, at $253 million, were up from 19 to 27 per cent.

An interesting sidelight of the list is the proportion being spent on modernization and rebuilding. Among those with a high percentage are Swift & Co. (33 per cent), Anaconda (75), Ford (50), St. Regis (76), New England Mutual (100). Others are Chemical Bank New York Trust (83) and Metropolitan Life (72), both engaged in major headquarters remodeling in New York City, and R. H. Macy, 45 per cent of whose building expenditures went toward remodeling its stores. Overall, the 100 Biggest put some 16 per cent of their money into modernization (based on 60 firms reporting such a breakdown in their building figures for 1961).

How do the 100 expect to do this year? Of 63 answering, 26, or 41 per cent, predict an increase; 33, or 52 per cent, foresee a decline; 4 expect no change. Despite some spectacular individual predictions (e.g., Boeing and Prudential Life), the net is a slight decline of some $20 million or 2.1 per cent.

The last 15 places on this year's list have been reserved for companies which have large and continuing building programs, but are unable to isolate outlays for the construction of buildings alone because of their accounting methods. Lacking specific figures, FORUM estimates that by the very size of their capital expenditures, these companies spent at least $4 million for building construction last year (some, obviously, spent a great deal more).

Eight of the 15 are oil companies. Although a large portion of their 1961 capital expenditures went to exploration and development of oil and gas reserves, all eight have extensive and continuing building programs.

Outside the oil companies, National Steel is well into a three-year construction program which will total $360 million. American Electric Power will spend $152 million for new construction and equipment in 1962. Goodyear Tire and Rubber will spend $100 million this year for new plant and modernization.

Other companies which do not report 1961 building but which FORUM believes should have qualified for the 100 Biggest list include Pure Oil Co., Olin Mathieson Chemical Corp., the Kroger Co., Allegheny Power System, New England Electric, Celanese Corp., Carborundum Co., and Montgomery Ward.

Reprints of this article, combined with preceding articles on the 100 Biggest Architects and 100 Biggest Contractors, may be had after Aug. 1 for 50 cents each prepaid.

	Company (main office)	U. S. construction put in place: Value ($000)	Type of construction as a per cent of 1961 total: Remodeling	Production	Research	Offices	Other	Forecast '62
1	American Tel. & Tel. (New York)	$191,000	10	—	—	10	90	+ 5%
2	Western Electric (New York)	72,600	13	52	29	6	13	—37
3	General Motors (New York)	69,000	NA	NA	NA	NA	NA	+30
4	General Electric (New York)[1]	50,000	NA	NA	NA	NA	NA	NA
*5	Loew's Theatres (New York)[2]	50,000	2	—	—	—	100	NA
6	Westinghouse Electric (Pittsburgh)	33,502	NA	NA	NA	NA	NA	—70
*7	Sears, Roebuck (Chicago)	32,192	20	—	—	—	100	+44
8	Eastman Kodak (Rochester, N. Y.)[2]	27,500	NA	NA	NA	NA	NA	NA
*9	Safeway Stores (Oakland, Calif.)	25,494	19	9	—	—	91	+53
10	E. I. duPont de Nemours (Wilmington, Del.)	25,000	NA	85	10	—	5	+20
11	Minnesota Mining & Mfg. (St. Paul)	23,000	5	60	5	30	5	—30
12	Bank of America (San Francisco)	19,000	10	—	—	100	—	NC
13	General Telephone & Electronics (New York)	19,000	NA	90	10	—	—	+13
14	Continental Can (New York)	18,800	NA	NA	NA	NA	NA	NA
15	First National City Bank (New York)[2]	18,000	10	—	—	100	—	—64
16	Swift & Co. (Chicago)	18,000	33	NA	—	NA	—	NA
17	International Business Machines (New York)	18,000	—	12	78	10	—	+39
18	Caterpillar Tractor (East Peoria, Ill.)	17,107	—	3	94	—	3	—51
19	Armco Steel (Middletown, Ohio)	17,000	—	95	3	2	—	—12
20	Chase Manhattan Bank (New York)	16,807	4	—	—	100	—	—20
21	Radio Corp. of America (New York)[2]	16,000	NA	NA	—	NA	—	NA
*22	Mack Trucks (Plainfield, N. J.)	15,611	2	85	5	7	3	—73
23	United Air Lines (Chicago)	15,462	14	—	—	50	50	—29
24	Equitable Life (New York)	15,100	9	—	—	100	—	— 5
25	The Anaconda Co. (New York)	15,000	75	85	15	—	—	NC
*26	Borg-Warner (Chicago)	14,491	2	94	2	2	2	—86
27	Food Fair Stores (Philadelphia)	14,000	NA	—	—	—	NA	+ 7
28	National Dairy Products Corp. (New York)[2]	13,900	NA	NA	—	—	—	NA
29	North American Aviation (Los Angeles)	13,500	11	36	19	45	—	—52
30	Borden Co. (New York)	12,000	NA	NA	—	—	NA	—
31	Aluminum Co. of America (Pittsburgh)	11,900	NA	NA	NA	NA	NA	+26
32	Owens-Illinois Glass (Toledo)	11,500	5	84	—	1	15	—39
33	American Cyanamid (Wayne, N. J.)	11,400	8	47	8	45	—	NA
34	Boeing Co. (Seattle)	11,000	10	30	13	54	3	+127
35	Ford Motor Co. (Dearborn, Mich.)	10,900	50	50	50	—	—	NA
*36	Hercules Powder (Wilmington, Del.)	10,400	15	93	5	—	2	—12
*37	W. R. Grace & Co. (New York)[2]	10,000	NA	NA	—	—	—	NA
*38	Socony Mobil (New York)[1]	10,000	NA	NA	—	—	NA	NA
*39	Sheraton Corp. of America (Boston)[2]	10,000	NA	—	—	—	100	NA
*40	Chemical Bank N. Y. Trust (New York)	9,869	83	—	—	100	—	—21
*41	Monsanto Chemical (St. Louis)	9,500	—	50	50	—	—	NA
42	Travelers Ins. Companies (Hartford, Conn.)	9,451	NA	NA	NA	NA	NA	NA
*43	Dow Chemical (Midland, Mich.)[1]	8,900	NA	NA	NA	—	—	NC
*44	Prudential Ins. Co. of America (Newark, N. J.)	8,900	10	—	—	55	45	+170
45	Morgan Guaranty Trust Co. (New York)	8,612	4	—	—	100	—	— 7
46	Jones & Laughlin Steel (Pittsburgh)	8,500	4	93	2	5	—	+ 3
*47	New England Mutual Life Ins. Co. (Boston)	8,080	100	2	6	91	1	—47
*48	St. Regis Paper (New York)	8,000	76	70	26	1	3	—37
*49	Lockheed Aircraft (Burbank, Calif.)	7,700	40	65	20	15	—	— 3
*50	B. F. Goodrich (Akron, Ohio)	7,500	10	92	2	—	6	—33

* Newcomers to list since 1959 survey

[1] = Estimate by company
[2] = Estimate by FORUM based on available statistics

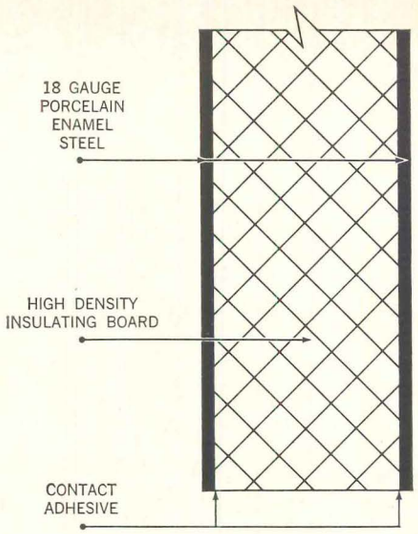
NA = Not Available
NC = No Change

	Company (main office)	U. S. construction put in place: Value ($000)	Type of construction as a per cent of 1961 total: Remodeling	Production	Research	Offices	Other	Forecast '62
*51	Stop & Shop (Boston)	$7,500	NA	—	—	—	—	NA
52	R. J. Reynolds Tobacco (Winston-Salem, N. C.)	7,260	27	95	—	5	—	+38%
*53	Metropolitan Life Ins. Co. (New York)	7,100	72	—	—	68	32	+17
54	Deere & Co. (Moline, Ill.)	6,992	20	70	7	10	13	+43
*55	Northwestern Mutual Life Ins. Co. (Milwaukee)	6,930	19	—	—	60	40	−37
56	International Harvester (Chicago)	6,922	44	43	—	10	47	−24
57	Lehigh Portland Cement (Allentown, Pa.)	6,602	—	97	—	—	3	−70
*58	Associated Dry Goods (New York)	6,477	17	—	—	—	100	+17
*59	Security First National Bank (Los Angeles)	6,300	NA	—	—	100	—	+27
*60	Eastern Gas & Fuel (Boston)	6,200	—	100	—	—	—	−55
*61	Armstrong Rubber Co. (West Haven, Conn.)	6,017	18	50	—	10	40	−74
*62	Flintkote Co. (New York)	6,000	4	71	—	—	29	−10
*63	Gimbel Brothers (New York)	6,000	—	—	—	—	100	NA
64	R. H. Macy & Co. (New York)	6,000	45	—	—	—	100	+117
*65	Republic Steel (Cleveland)	6,000	2	97	—	1	2	−17
*66	National Distillers & Chemical (New York)	5,739	20	50	48	2	—	−83
67	Ideal Cement (Denver)	5,500	—	5	—	—	95	+27
*68	Weyerhaeuser Co. (Tacoma, Wash.)	5,500	45	NA	NA	NA	NA	− 9
*69	Spiegel, Inc. (Chicago)	5,100	—	—	—	—	100	NA
*70	International Paper (New York)[2]	5,000	NA	NA	NA	NA	NA	+140
*71	Grumman Aircraft Eng. (Bethpage, N. Y.)	5,000	—	—	100	—	—	NA
*72	Armstrong Cork (Lancaster, Pa.)[1]	5,000	NA	NA	NA	NA	NA	NA
*73	Parke, Davis & Co. (Detroit)[1]	5,000	—	NA	—	—	—	NC
*74	Federal Paper Board (Bogota, N. J.)	5,000	NA	80	—	—	20	+80
*75	Allis-Chalmers Mfg. Co. (West Allis, Wis.)	4,900	NA	NA	NA	NA	NA	NA
*76	Columbia Gas System (New York)	4,900	6	30	—	68	2	− 8
*77	Genesco, Inc. (Nashville, Tenn.)	4,810	NA	30	—	30	40	+81
*78	Colgate-Palmolive (New York)	4,668	12	9	88	3	—	−14
*79	United California Bank (Los Angeles)	4,516	59	—	—	100	—	+55
80	Detroit Edison (Detroit)	4,504	88	62	—	—	38	−53
*81	Collins Radio (Cedar Rapids, Iowa)[1]	4,500	25	75	13	12	—	−80
*82	United States Gypsum (Chicago)	4,500	5	60	8	32	—	−11
83	Douglas Aircraft (Santa Monica, Calif.)	4,465	93	1	1	93	5	+119
*84	Continental Assurance (Chicago)	4,457	4	—	—	100	—	+12
*85	Campbell Soup (Camden, N. J.)[1]	4,000	NA	NA	NA	NA	NA	NA

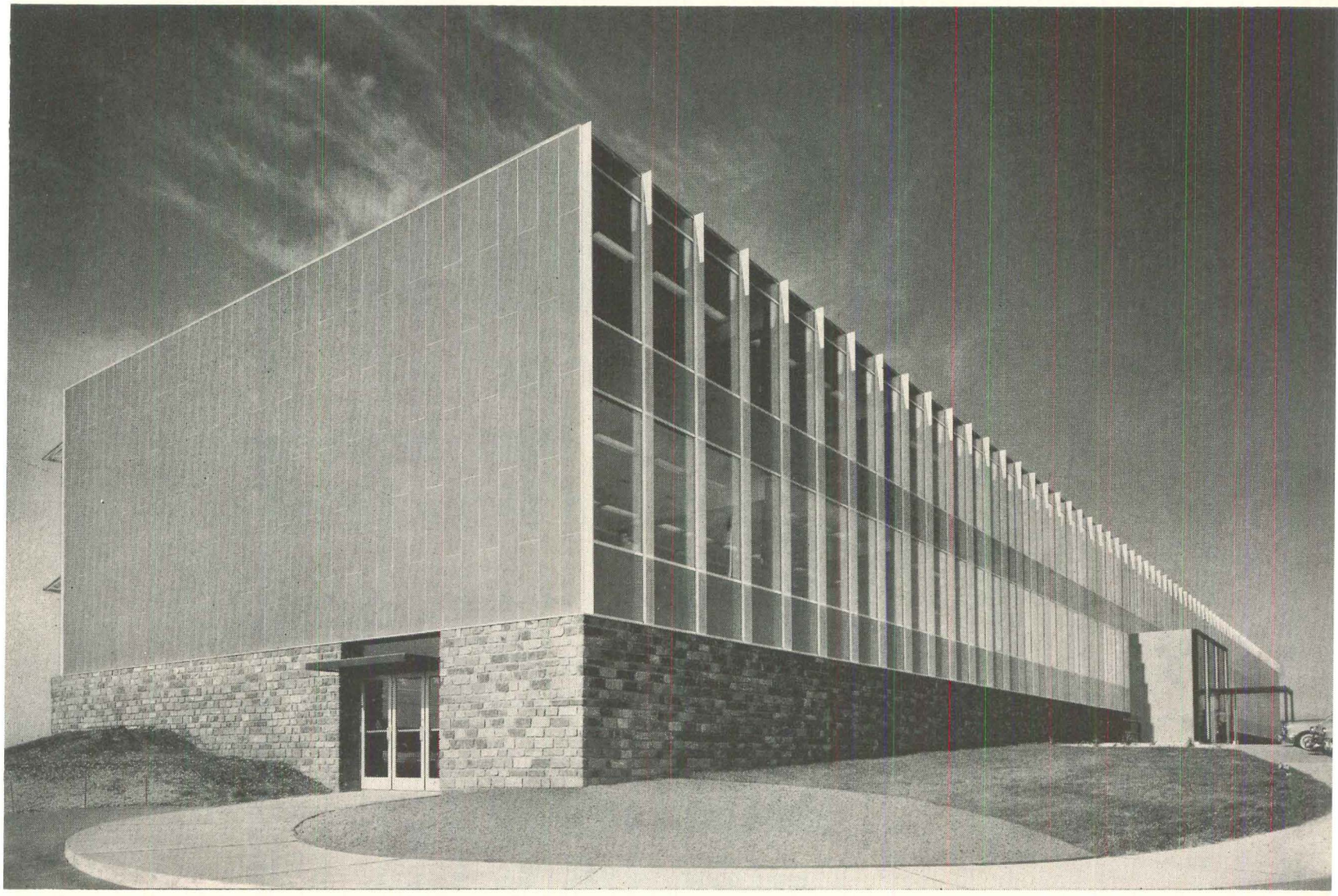
Companies with continuing building programs in excess of $4 million[2]
(ranked by 1961 Capital Expenditures)

	Company (main office)	1961 building ($000)	Capital expenditures
*1	Standard Oil of New Jersey (New York)	$4,000+	$805,000,000
*2	Texaco Inc. (New York)	4,000+	536,000,000
*3	Standard Oil of California (San Francisco)	4,000+	475,000,000
*4	Standard Oil of Indiana (Chicago)	4,000+	470,316,000
*5	Gulf Oil (Pittsburgh)	4,000+	440,000,000
*6	United States Steel (New York)	4,000+	327,000,000
*7	Bethlehem Steel (Bethlehem, Pa.)	4,000+	144,971,000
*8	Phillips Petroleum (Bartlesville, Okla.)	4,000+	131,900,000
*9	Cities Service (New York)	4,000+	121,077,000
*10	Sun Oil (Philadelphia)	4,000+	120,000,000
11	Allied Chemical (New York)	4,000+	112,700,000
*12	National Steel (Pittsburgh)	4,000+	107,106,000
13	American Electric Power (New York)	4,000+	96,000,000†
14	Goodyear Tire & Rubber (Akron, Ohio)	4,000+	82,638,000
*15	General Public Utilities (New York)	4,000+	76,070,000

† construction and equipment only



Porcelain-faced laminated panels keep this six-year-old building looking like new



McDonnell Aircraft Corporation Engineering Campus at St. Louis, Mo. Architect: Harris Armstrong, F.A.I.A. Panels made by Atlas Enameling Company, Inc., St. Louis. General contractor, Gamble Construction Company, St. Louis.

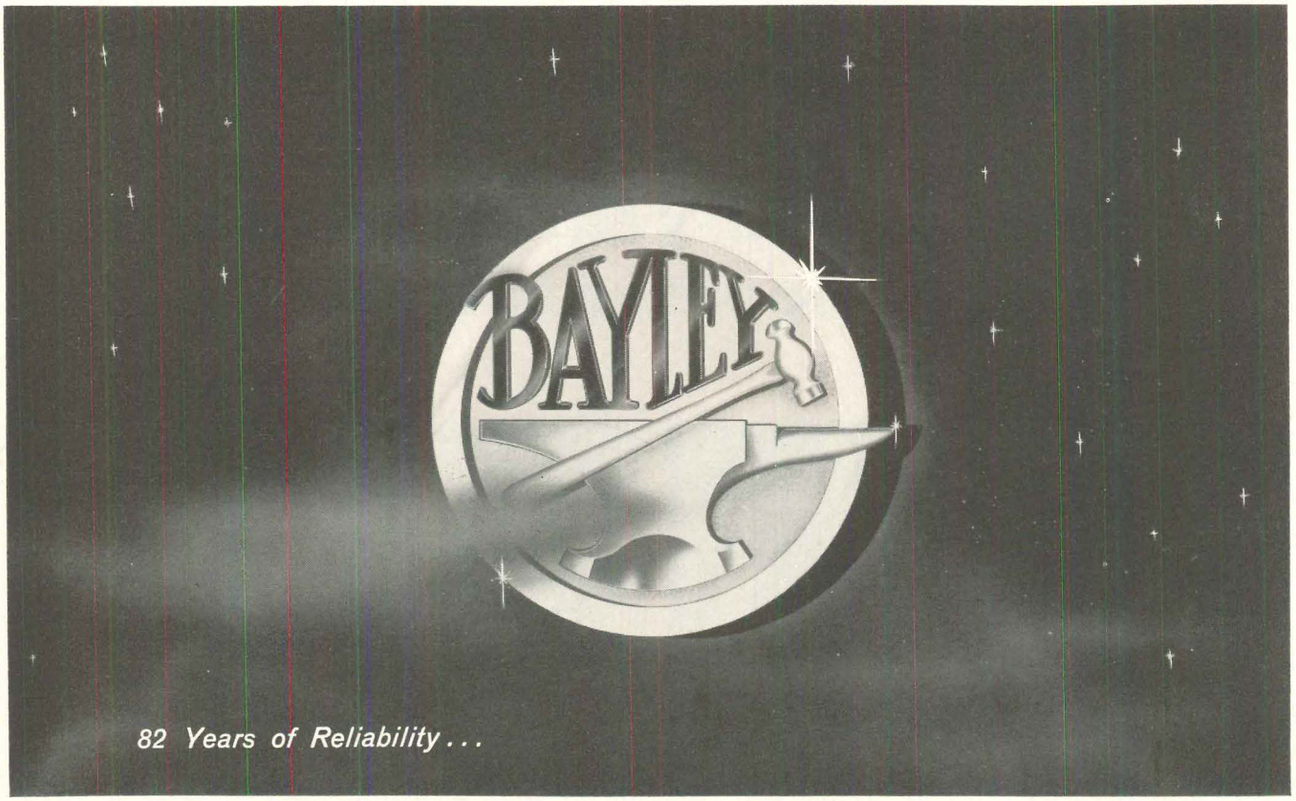
This building at the McDonnell Aircraft Corporation Engineering Campus looks so bright it might have been put up yesterday. Actually it is six years old.

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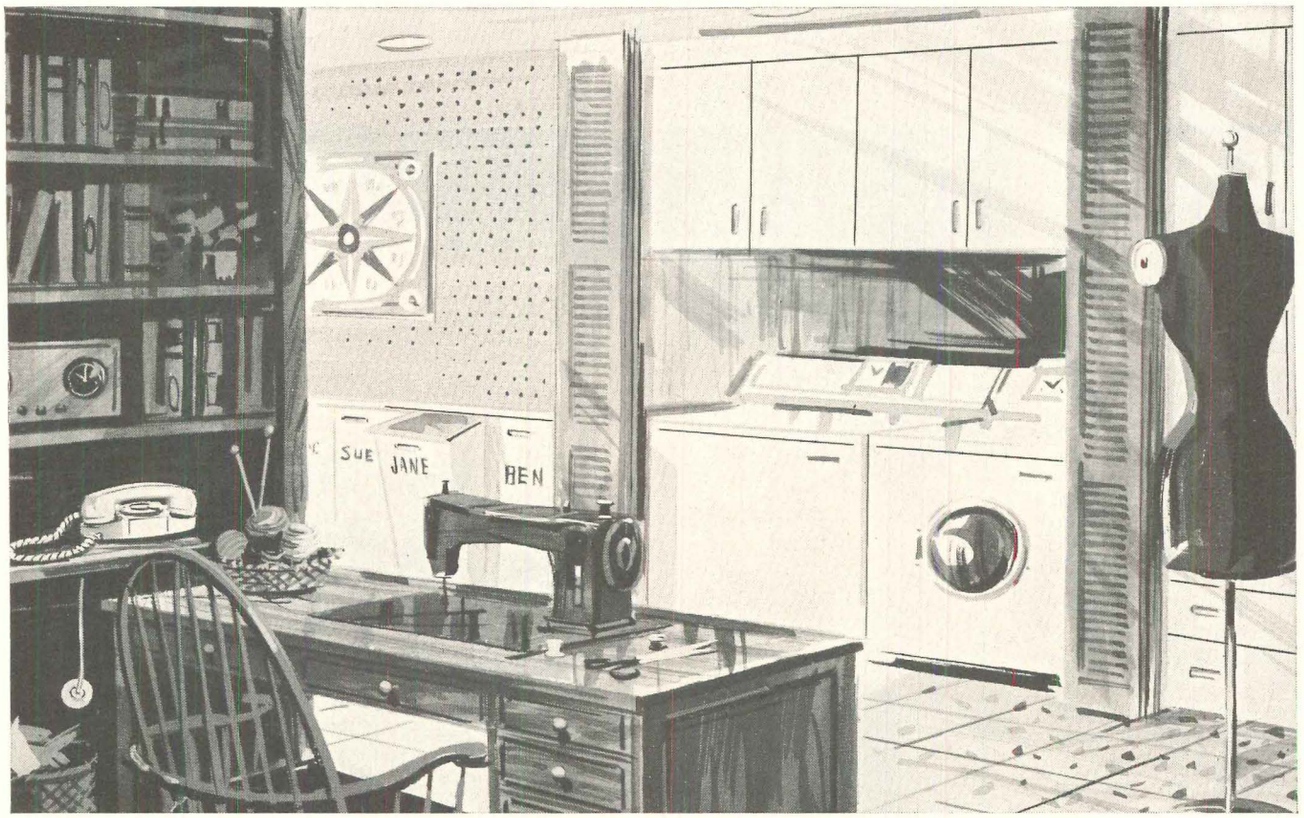
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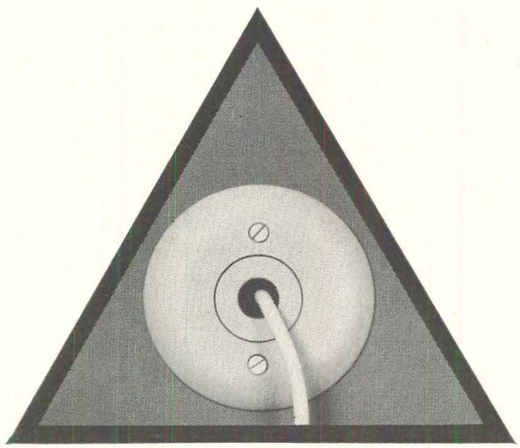
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NEW COVENTRY CATHEDRAL

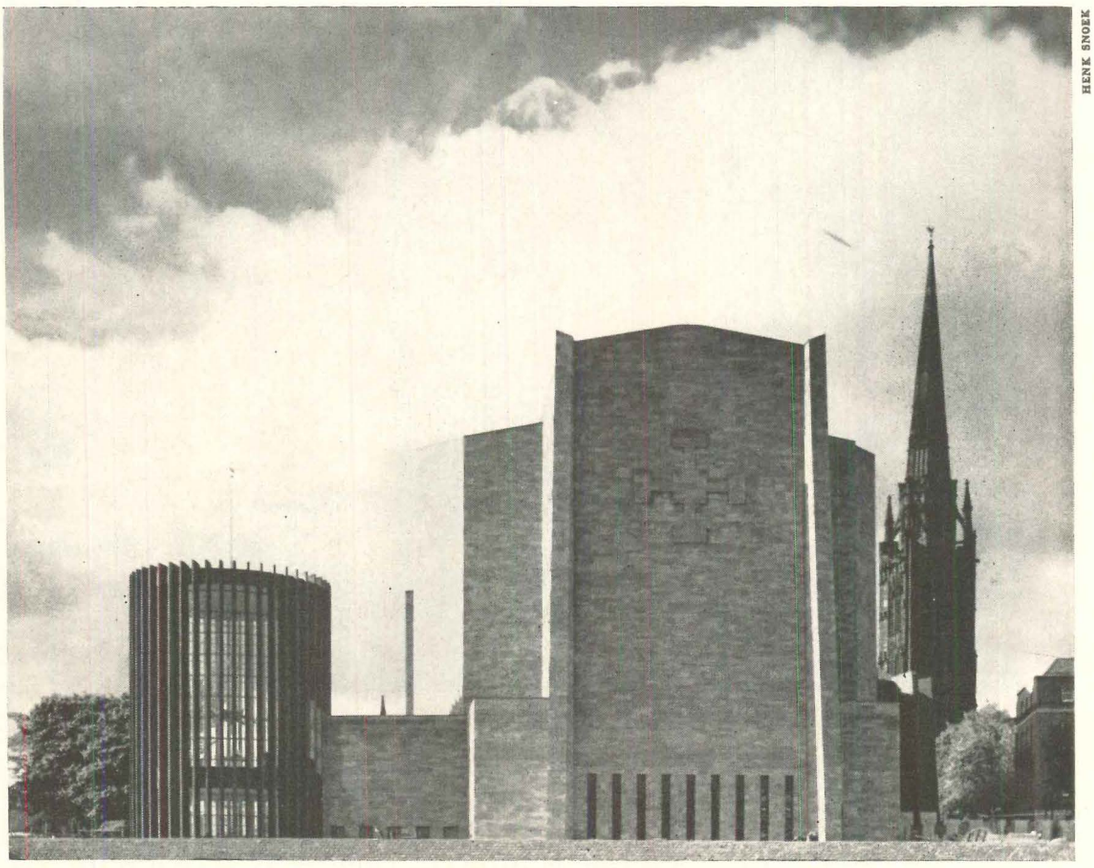
The consecration a few weeks ago of Coventry's new Cathedral Church of St. Michael was a moment of triumph not only for the British people but also for Architect Sir Basil Spence. Twenty-two years have passed since the savage Luftwaffe bombing of 1940, and seven years of controversy since Sir Basil won a competition over 218 other entries for a design to replace the ruined fifteenth-century cathedral.

By the time of the opening ceremony, much of the criticism seemed dissipated and many Britons agreed with the Archbishop of Canterbury that "here already, in fact and in aspiration, is a glory greater than the glory that was before." The shattered walls and spire of the old cathedral have been preserved as a "Sanctuary of the Ruins" and are connected to the new cathedral by a huge open entrance porch.

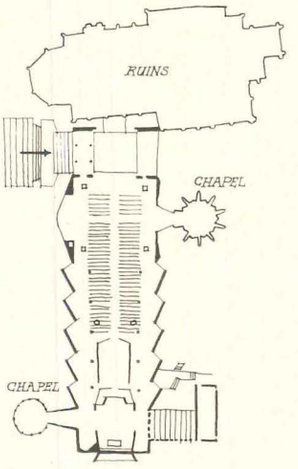
The architect was so conscious of historical continuity that the pinkish gray sandstone lining the undulating walls of the new cathedral was brought from the same Staffordshire quarry that supplied the original 500 years earlier. But Sir Basil's design, the only British cathedral begun and completed in the past three centuries, definitely belongs to the twentieth: it includes, among other things, a restaurant and a radio and television broadcasting studio.

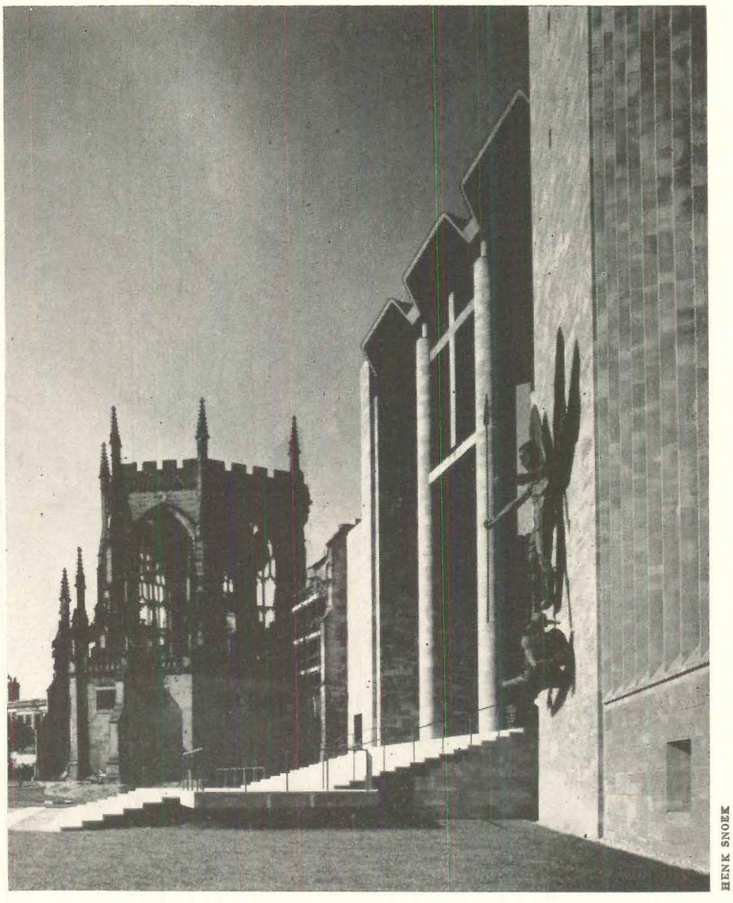
The simple exterior of the new Coventry is dominated by a 25-foot-high bronze sculpture, "St. Michael and the Devil," by the late Sir Jacob Epstein. Some of Britain's and Europe's finest artist-craftsmen have contributed to the interior. Painter Graham Sutherland's 39 by 70-foot tapestry, "Christ in Majesty," adorns the main altar. Ten stained-glass windows are set into the angled walls; they flood the nave with brilliant colors but are invisible to worshipers until they turn from the Communion rail and symbolically see the light's source.

The 14 tapered columns of the interior seem amazingly slender compared with the massive walls. Precast, they are planted on bronze pins only 2½-inches square in the black and white polished marble floor, and support a nave vaulting infilled with Sitka spruce. At either end of the nave, a circular chapel branches off on a slender corridor stem. END



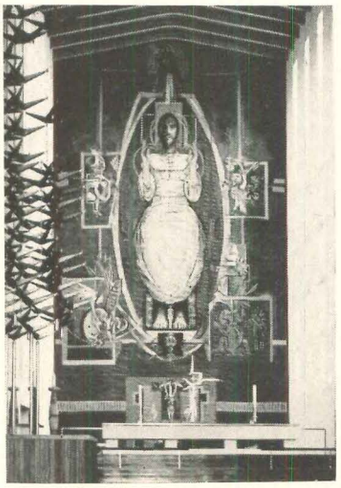
HENK SNOEK





HENK SNOEK

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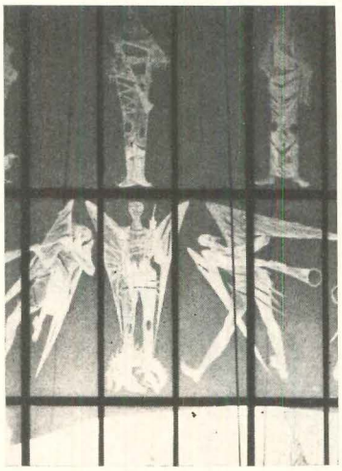
Altar tapestry: a seated Christ, symbols of the four evangelists.

ASSOCIATED PRESS

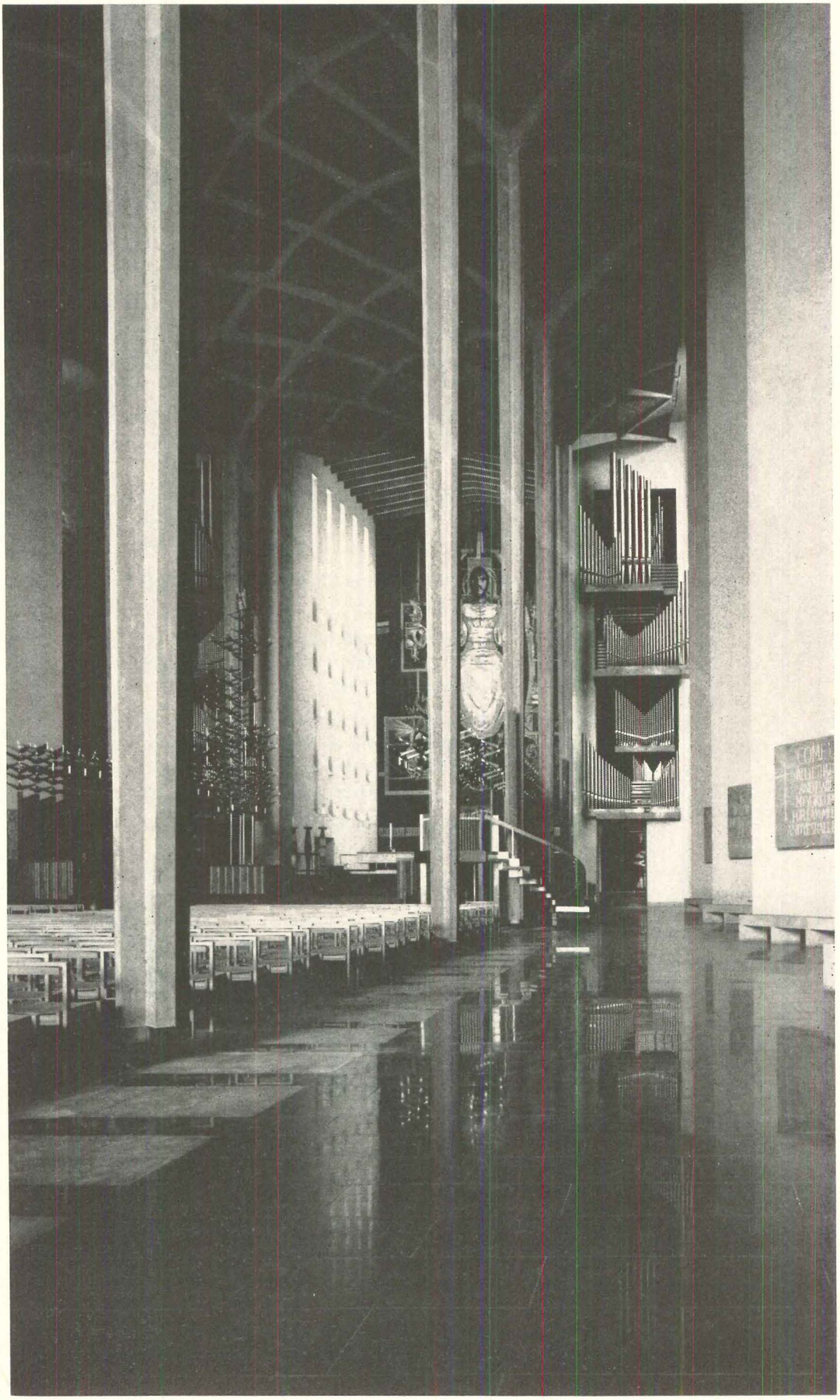


St. Michael by Sir Jacob Epstein guards the new cathedral steps.

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Angels and saints dance on glass entrance screen by John Hutton.



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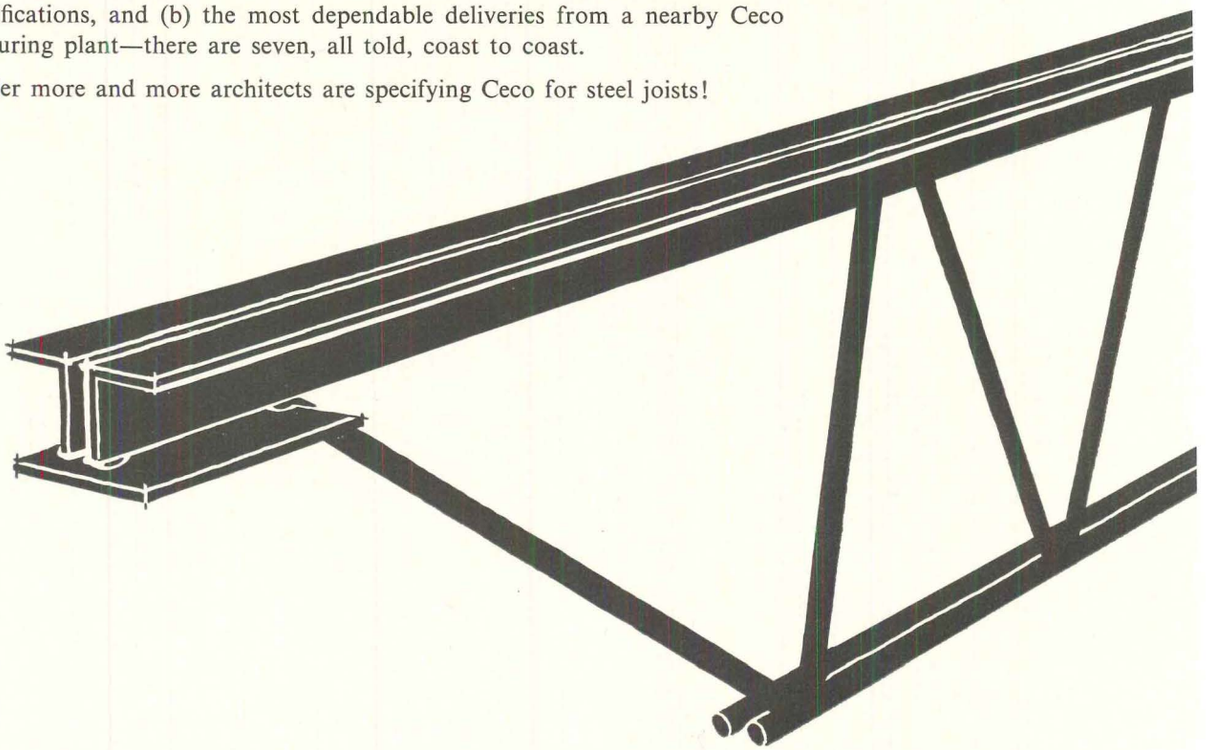
- a 24H8 joist can carry 207 lbs per lineal ft at 48 ft, whereas the old 24S8 joist carries only 145 lbs at that span. Or . . .
- the limit load carried by a 24S8 joist *on a 40 ft span* can now be carried safely by a 24H8 *on a 48 ft span.*

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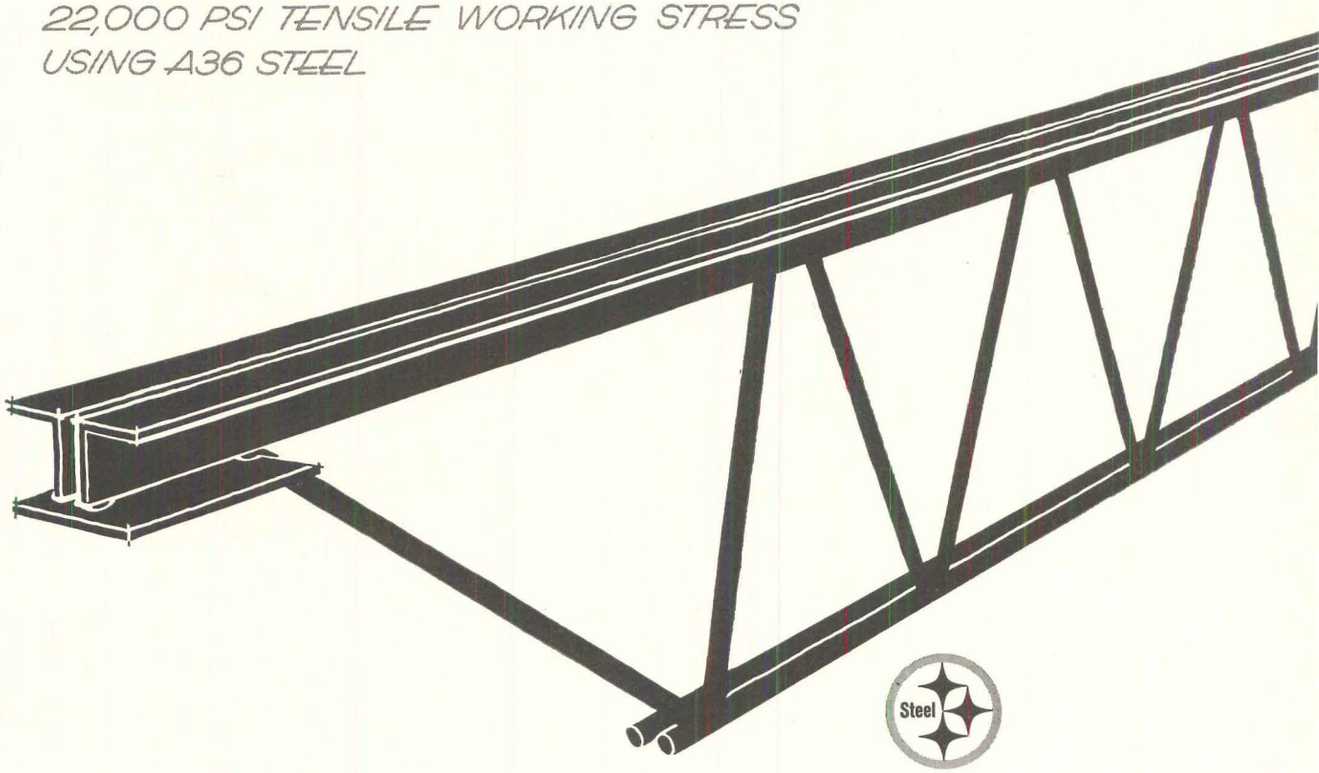


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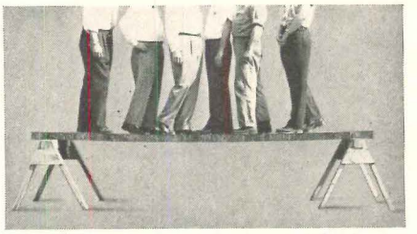
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Architect's guide to Union Honeycomb core:

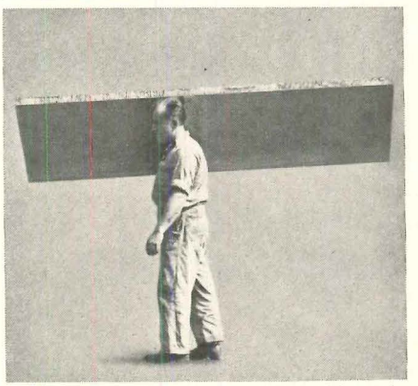
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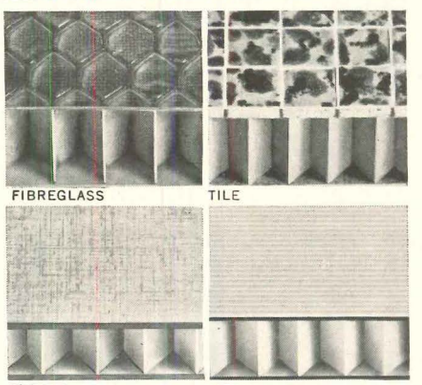
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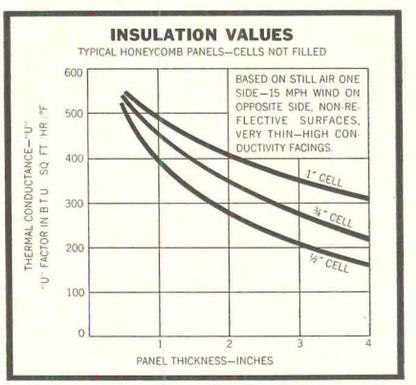
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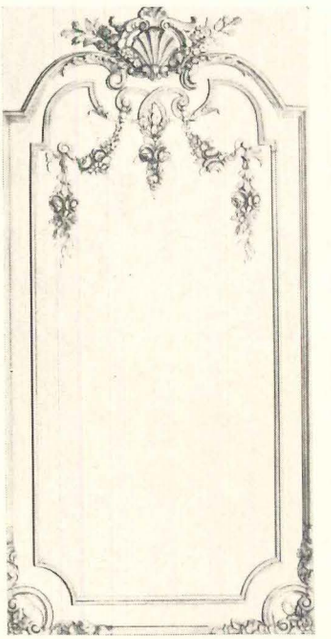
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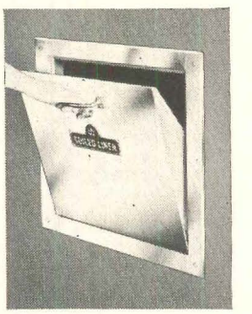
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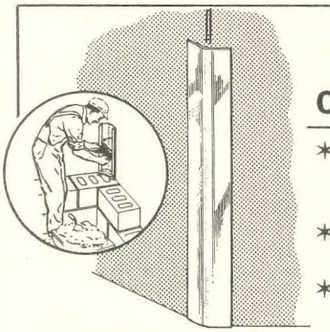
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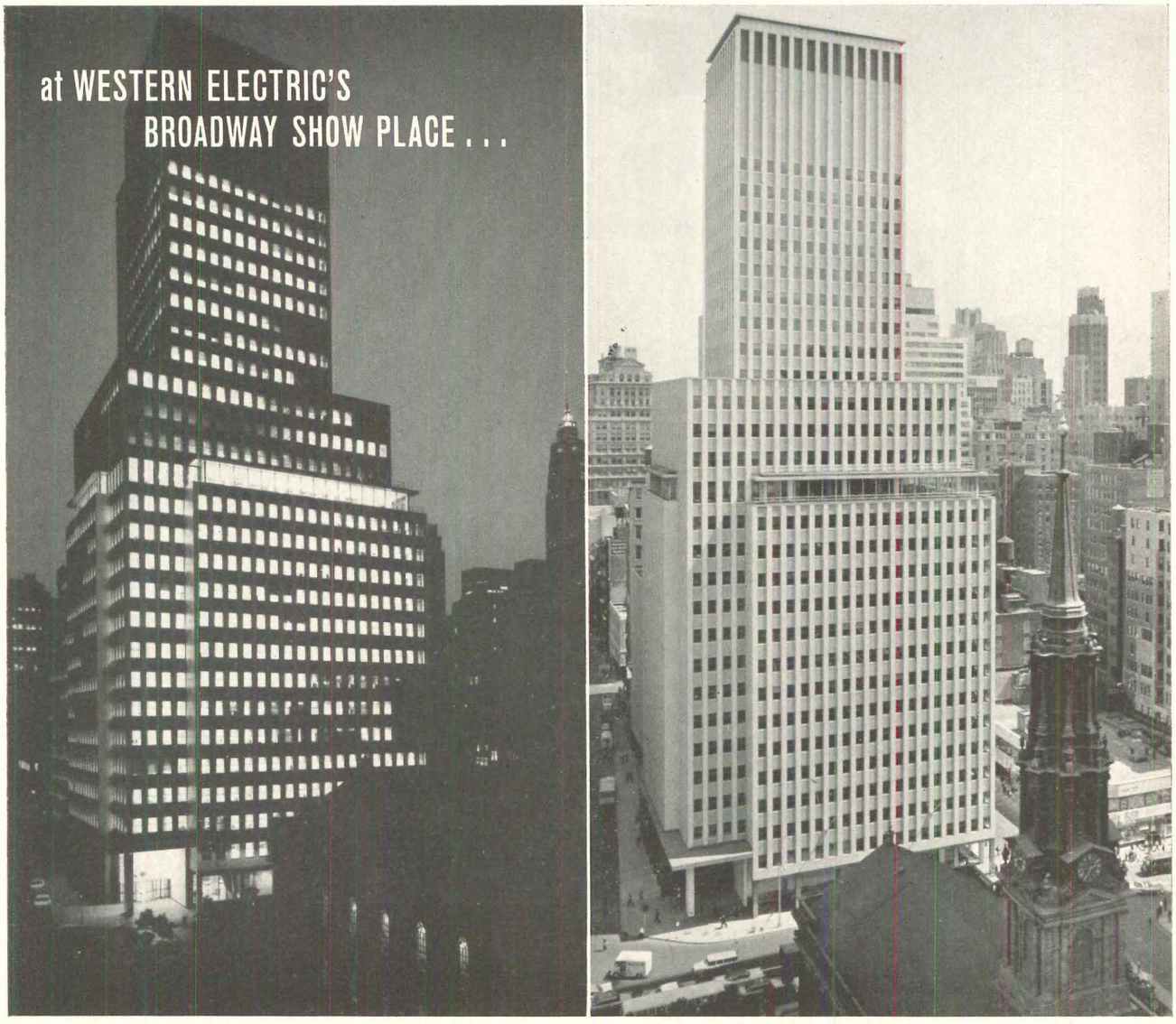
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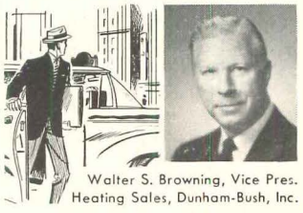
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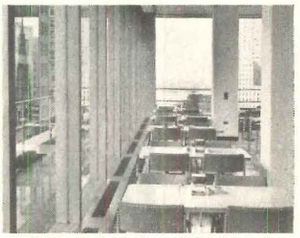
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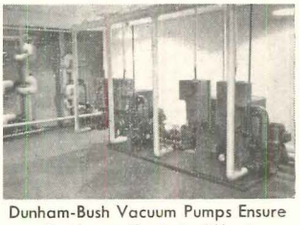
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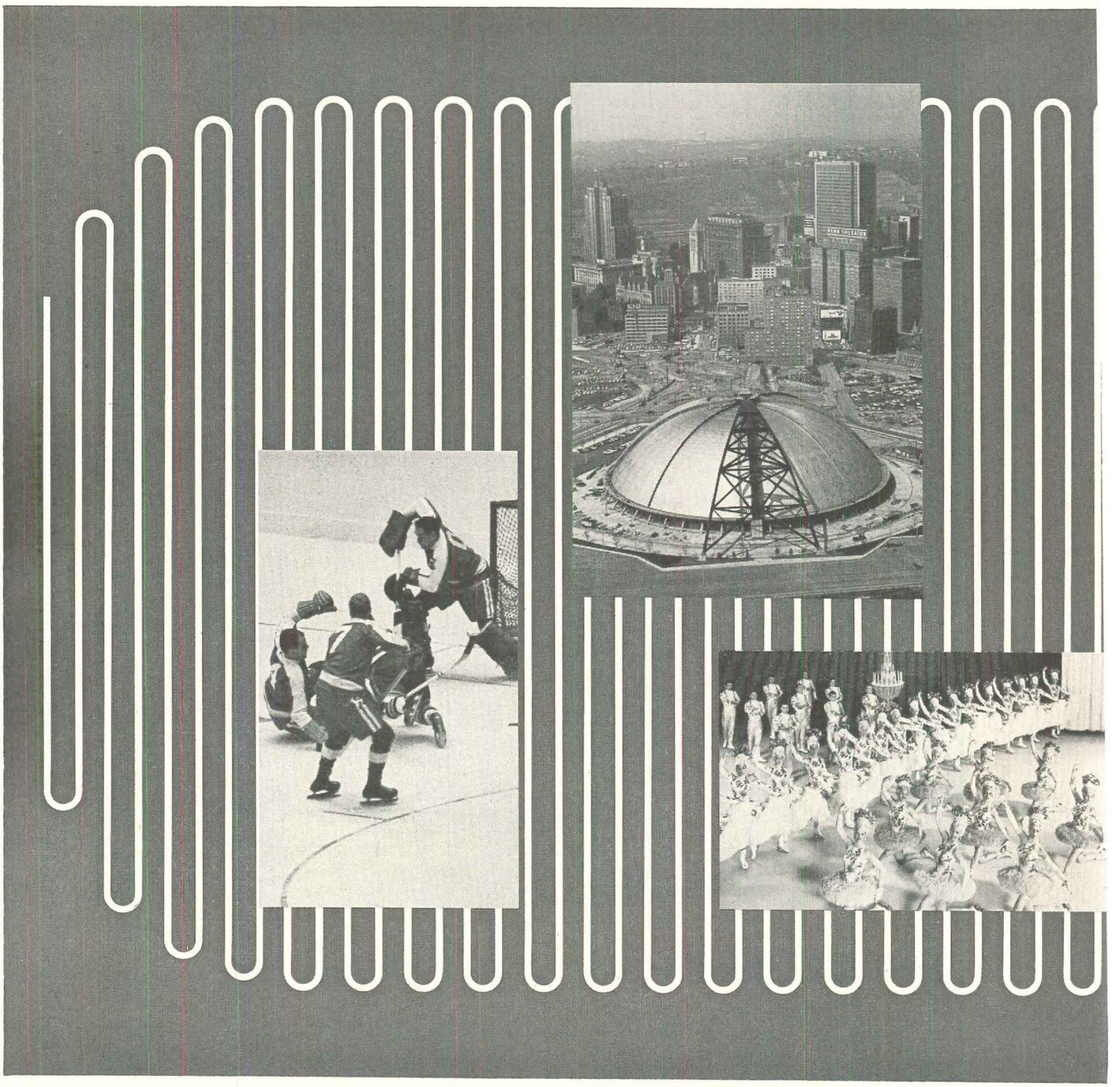
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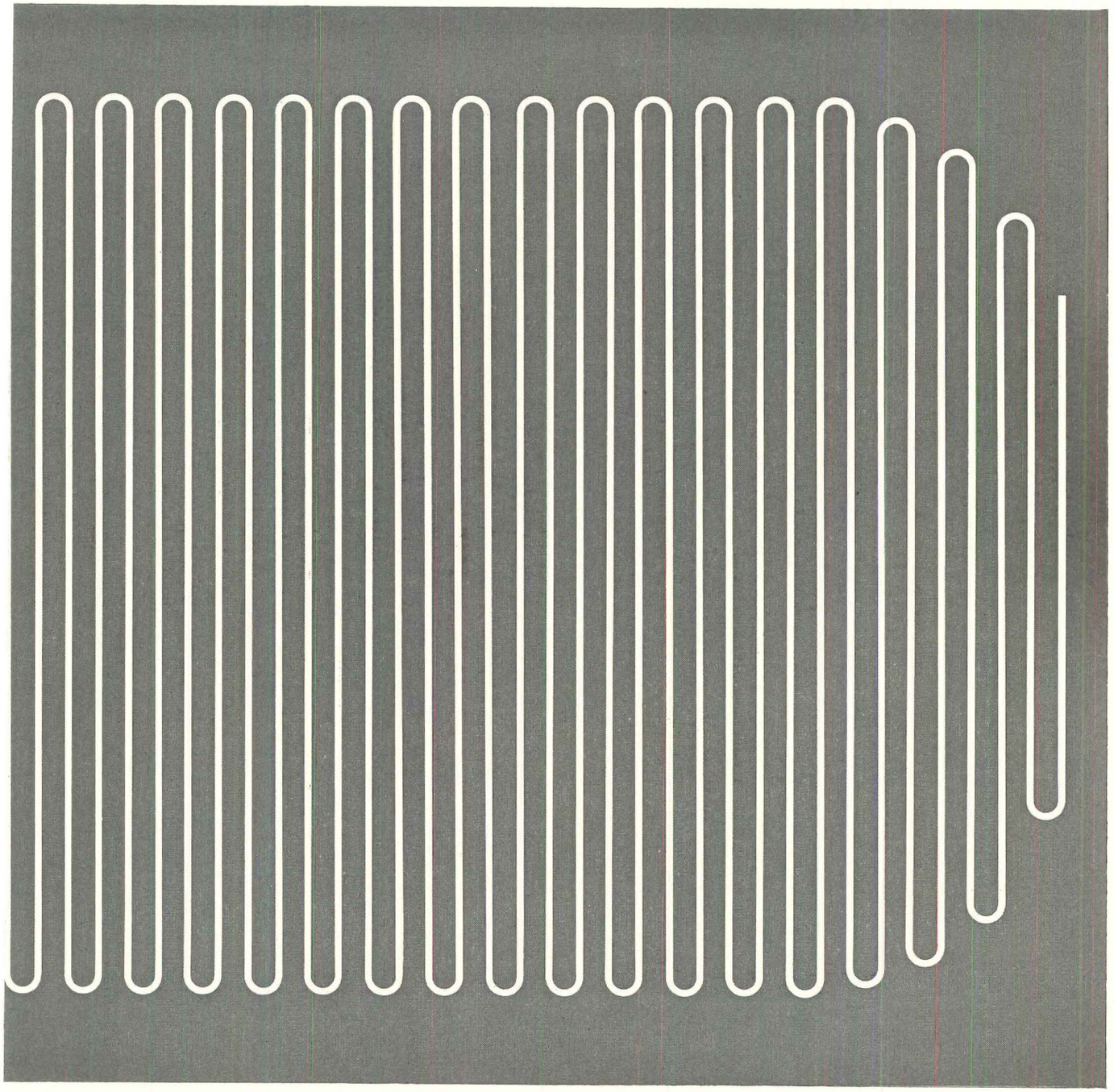
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Pittsburgh's gleaming new Auditorium, with its movable Stainless Steel roof, is now open. The world famous Ice Capades were the first attraction, and professional hockey returned to the city to cavort on the Auditorium's ice rink, which has some 11½ miles of USS National Pipe underneath.

For quick freezing of the ice, temperatures will go down around −42°F., although specifications called for a temperature of "only" −16°F. The system uses a calcium chloride brine solution with 1.25 specific gravity, and it is a 25.9% solution. The steel pipe used in the coils was 1¼" standard and extra strong; the reverse header pipe



Architect: Mitchell & Ritchey, Pittsburgh, Pa. **Mechanical Contractor:** Limbach Company, Pittsburgh, Pa. **Supply House:** Crane Supply Company, Pittsburgh, Pa.

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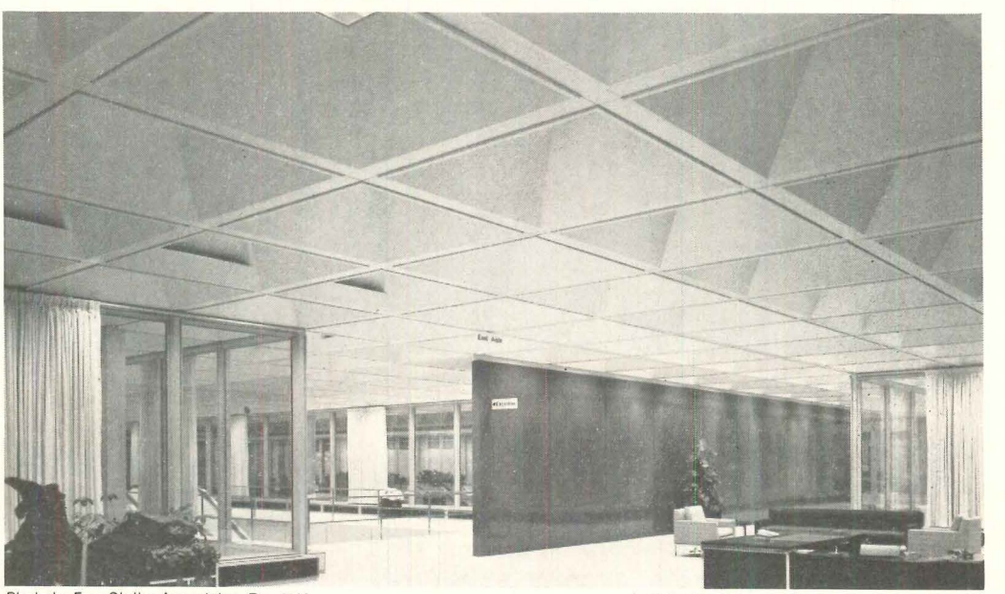


Photo by Ezra Stoller Associates, Rye, N.Y.

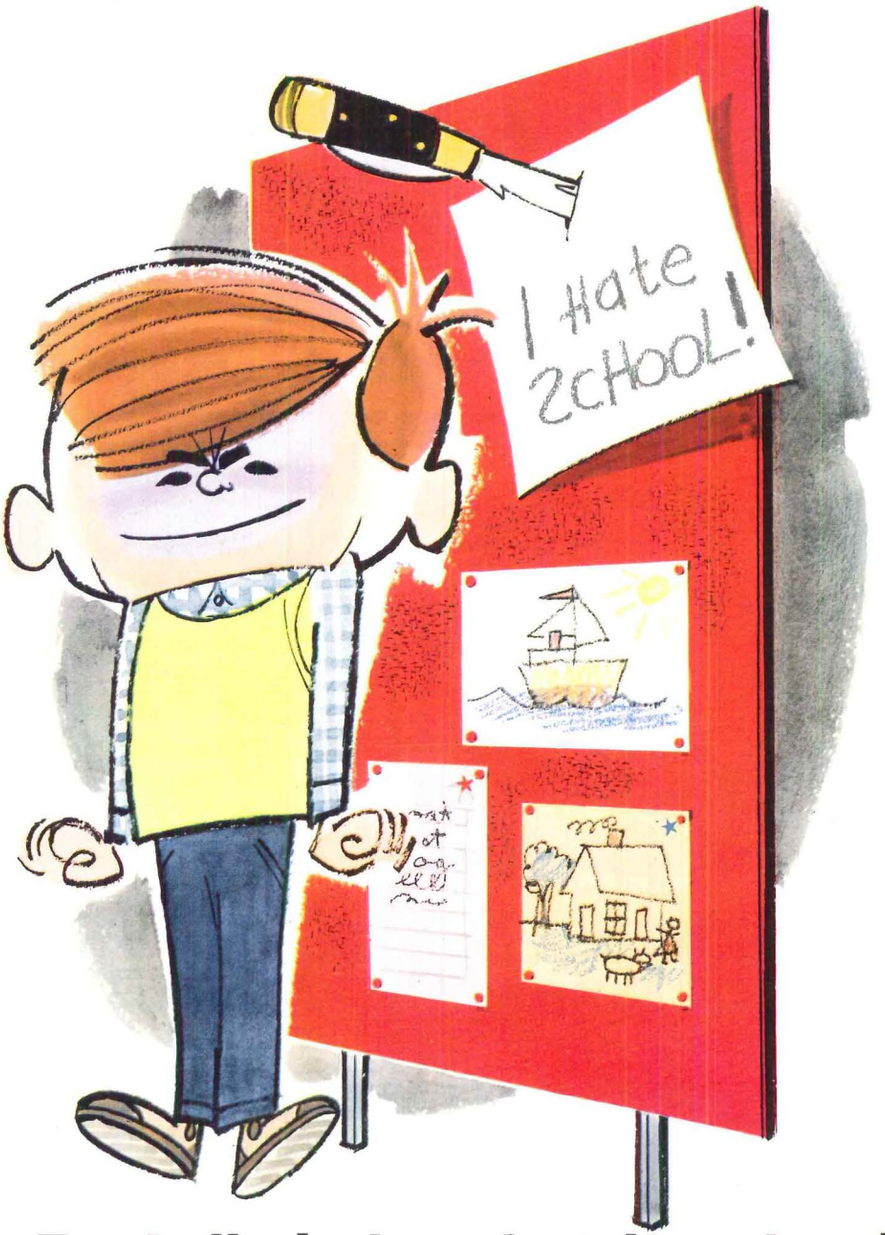
Architects: Skidmore, Owings & Merrill, Chicago



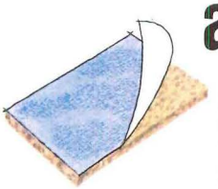
Reynold Berti of The Berti Company, Detroit, plastering contractor for Upjohn building, Kalamazoo, Mich.

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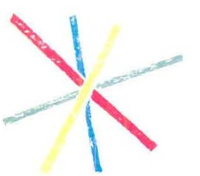


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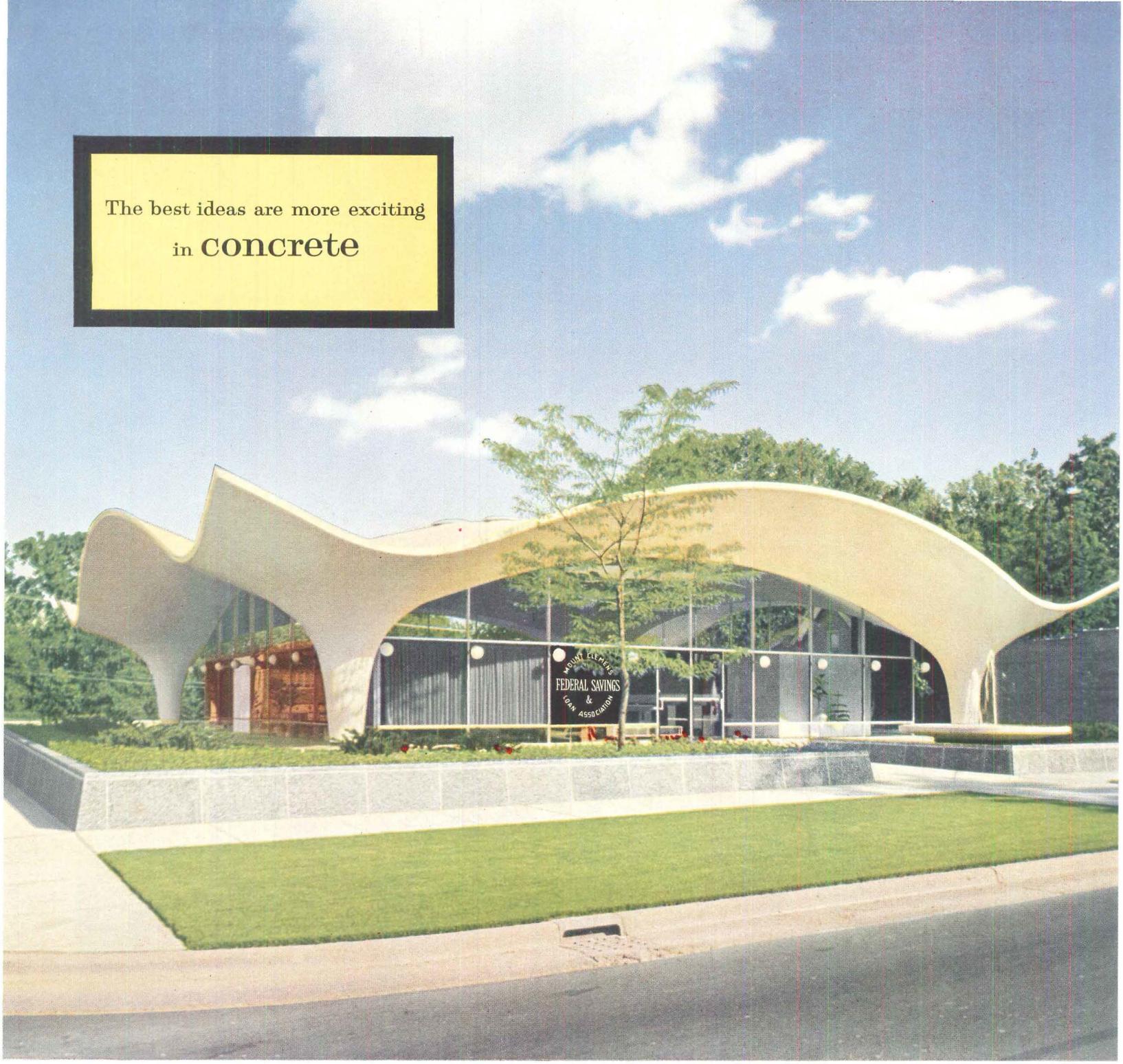
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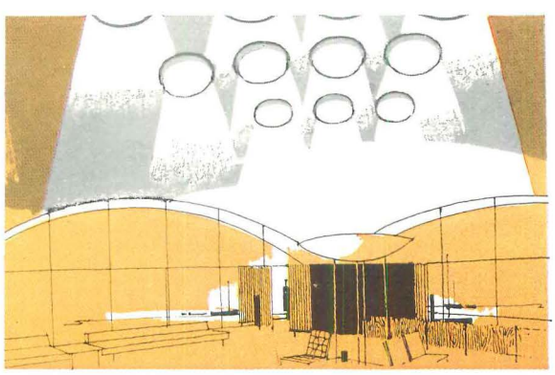
1329 WILLOUGHBY AVENUE, BROOKLYN 37, NEW YORK

The best ideas are more exciting in concrete



Mount Clemens Federal Savings and Loan Assn., Mount Clemens, Mich. Architect: Meathe, Kessler and Assoc., Inc., Grosse Pointe, Mich. Photo by Baltazar Korab.

Soaring shell roof that lets the daylight through



Long span of concrete shell roof permits spacious, column-free interior, with ceiling 23½ feet high at the center. 21 skylights piercing the thin shell create dramatic light patterns.

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The complete freedom of form possible only with concrete inspires architects everywhere to seek imaginative new designs for buildings of all types and sizes.

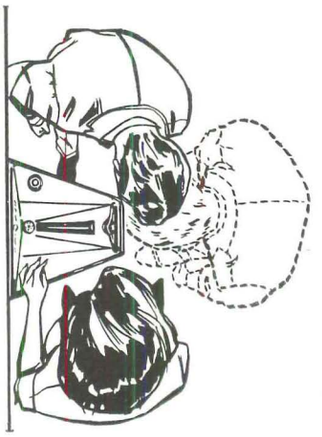
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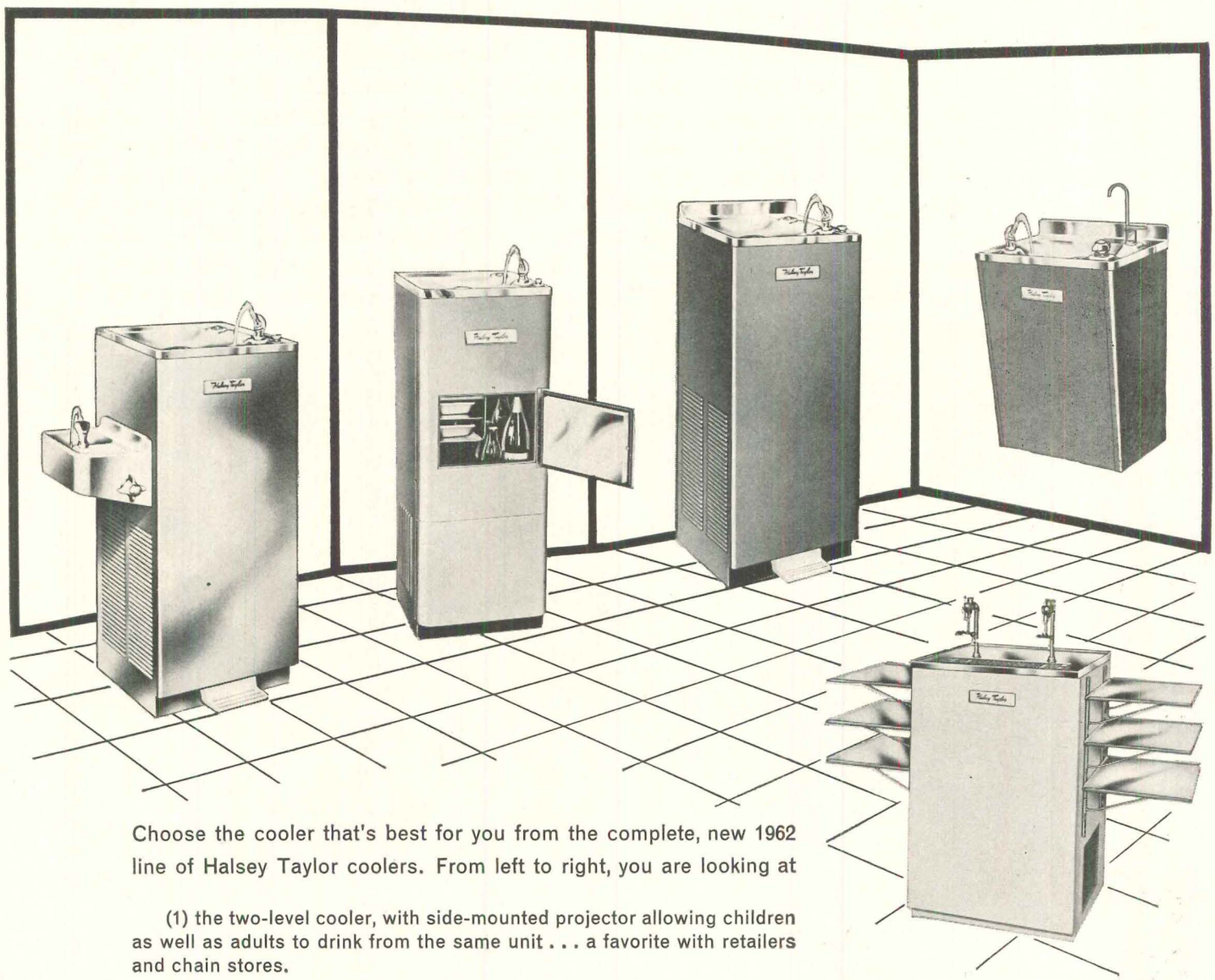
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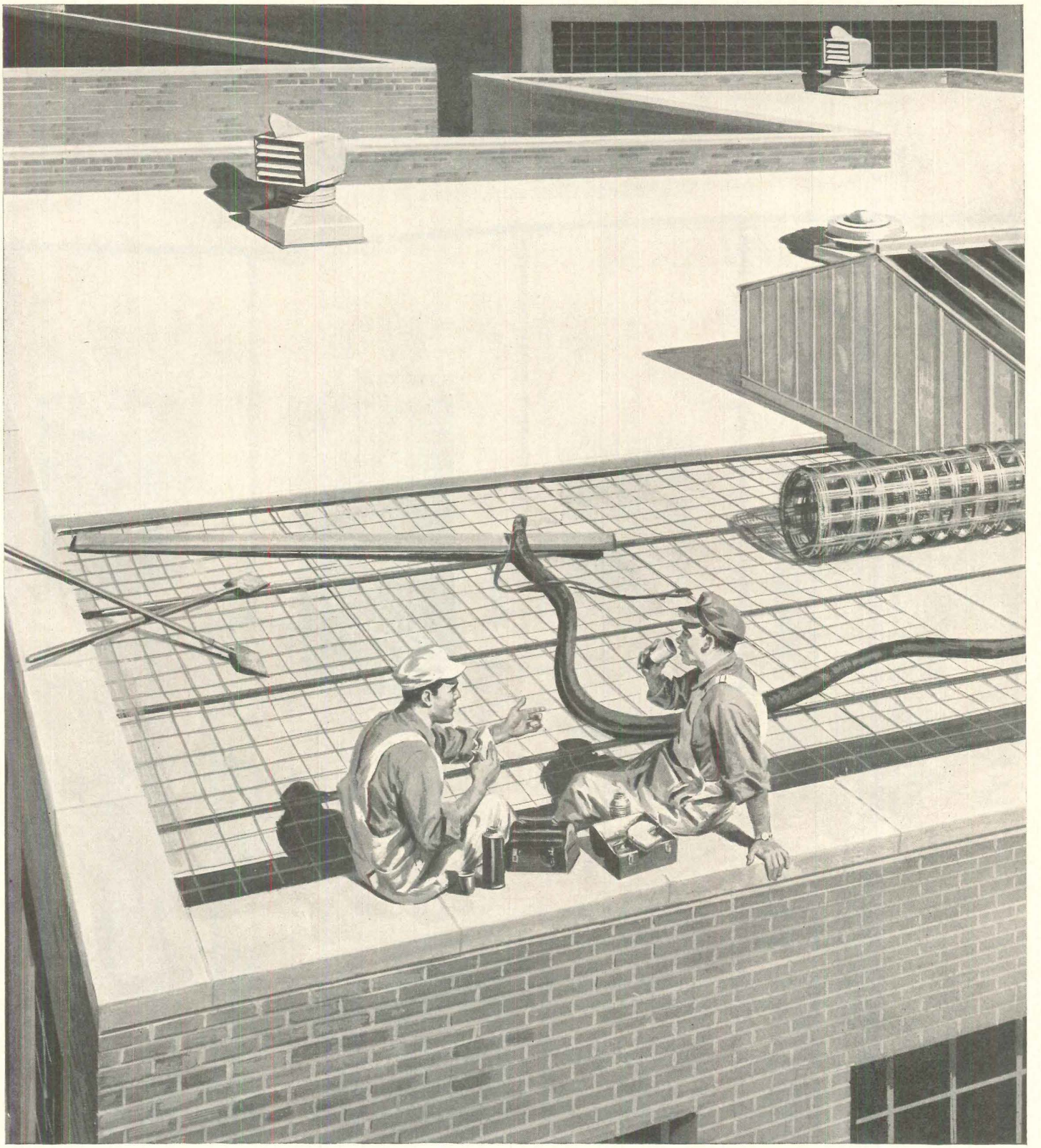
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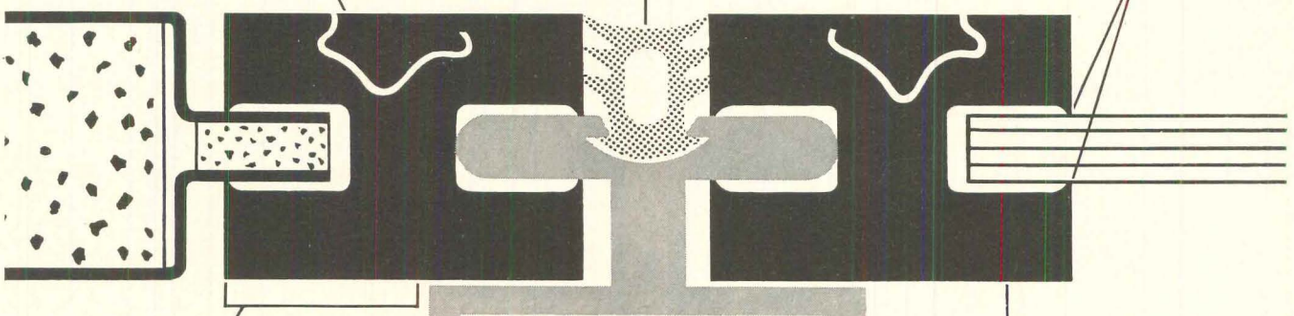
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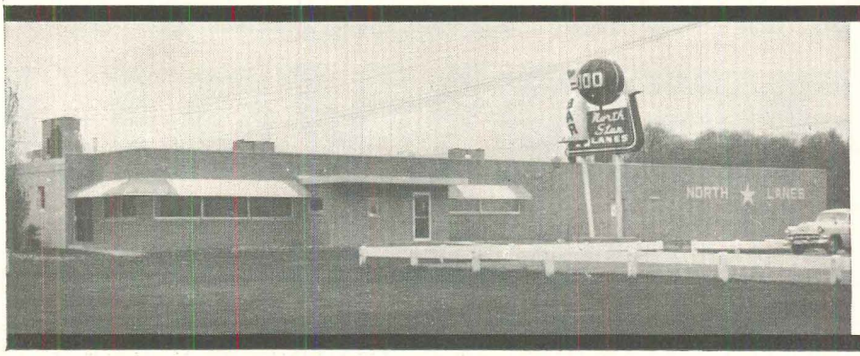
Mr. Pietruszewski, the lessee, had already contracted with twelve different bowling leagues at $3,000 each. Failure to fulfill his obligations would mean loss of a major portion of his entire year's revenue.

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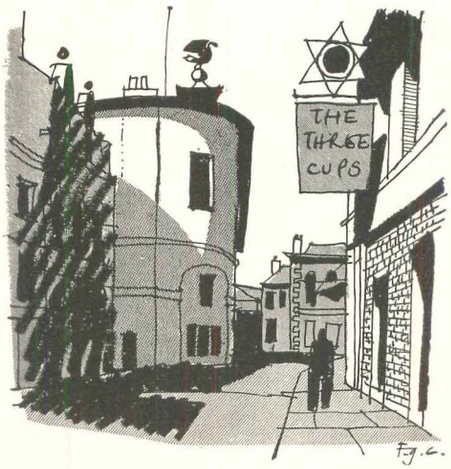
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TOWNSCAPE. By Gordon Cullen. Published by Reinhold Publishing Corporation, 430 Park Ave., New York, N. Y. 325 pp. 7½" x 9½". Illus. $10.

A discerning literary critic once pointed out that English writers had been influenced by Russian short stories of the late nineteenth century before the stories had even been translated, almost before the English had known that the stories existed. The influence was in the air: the wonderful virus had simply been uncorked and had streaked across Europe.

This is how it has been with Gordon Cullen, the great English draftsman. Ten years ago many American architects, particularly students (even those who never had seen the *Architectural Review,* in which Cullen's drawings were then appearing), found themselves trying to draw like Cullen, perhaps because other people they admired had begun more consciously to try.

This influence is waning today because people find that simple as Cullen's techniques may appear, and available as the overlay tones are, nobody but Cullen himself can draw with the same slashing style. His has been a good influence on men such as the outstanding American delineator, Helmut Jacoby, who went on to develop their own styles. But others simply have had to give up Cullen and move to drawing masters with more apparent styles and, perhaps, less content.

For this is Cullen's secret. He is an artist with a cause—so compelling a one that it has helped form his swift style. His drawings never seem to linger lovingly over detail, but always seem speedy, impatient to get on with it. His cause, of course, is Townscape, the title of this brilliant book published first in England and now made available in this country.

What is Townscape? Cullen himself calls it "an art other than architecture . . . the art of relationship." One building, he says, can be architecture, but two are townscape. His exacting art is concerned with the streets or other spaces between buildings, with the sequences of enclosure or release to which they expose the pedestrian, with cobblestones underfoot and the slice of sky revealed above. It is city planning, of course, but a part of that science which remains art, deeply concerned with the texture of the finished, constructed, sociological solution. Cullen, incidentally, is neither bitter nor bombastic about the conventional planning process, but he does warn: "Statistics are abstracts; when they are plucked out of the completeness of life and converted into plans and the plans into buildings they will be lifeless. The result will be a three-dimensional diagram in which people are asked to live. In trying to colonize such a wasteland, to translate it from an environment for walking stomachs into a home for human beings, the difficulty lay in finding the point of application, in finding the gateway into the castle."

Cullen is by no means yet inside the castle of planning; he is more tolerated than really trusted by many realistic (or is the word cynical?) planners. He has made much progress in scaling the wall, however, and in his book he lists and illustrates the devices he has been able to categorize. (For example, in the index under "A" alone are: "Absence, noticeable, Adaptability, Advantage, Advertisements, Aedicule, Aerial dominance, Agriculture, Animism, Anticipation, Arable landscape, Arcades, Arcadia, Archways, Articulation, and Awnings"!)

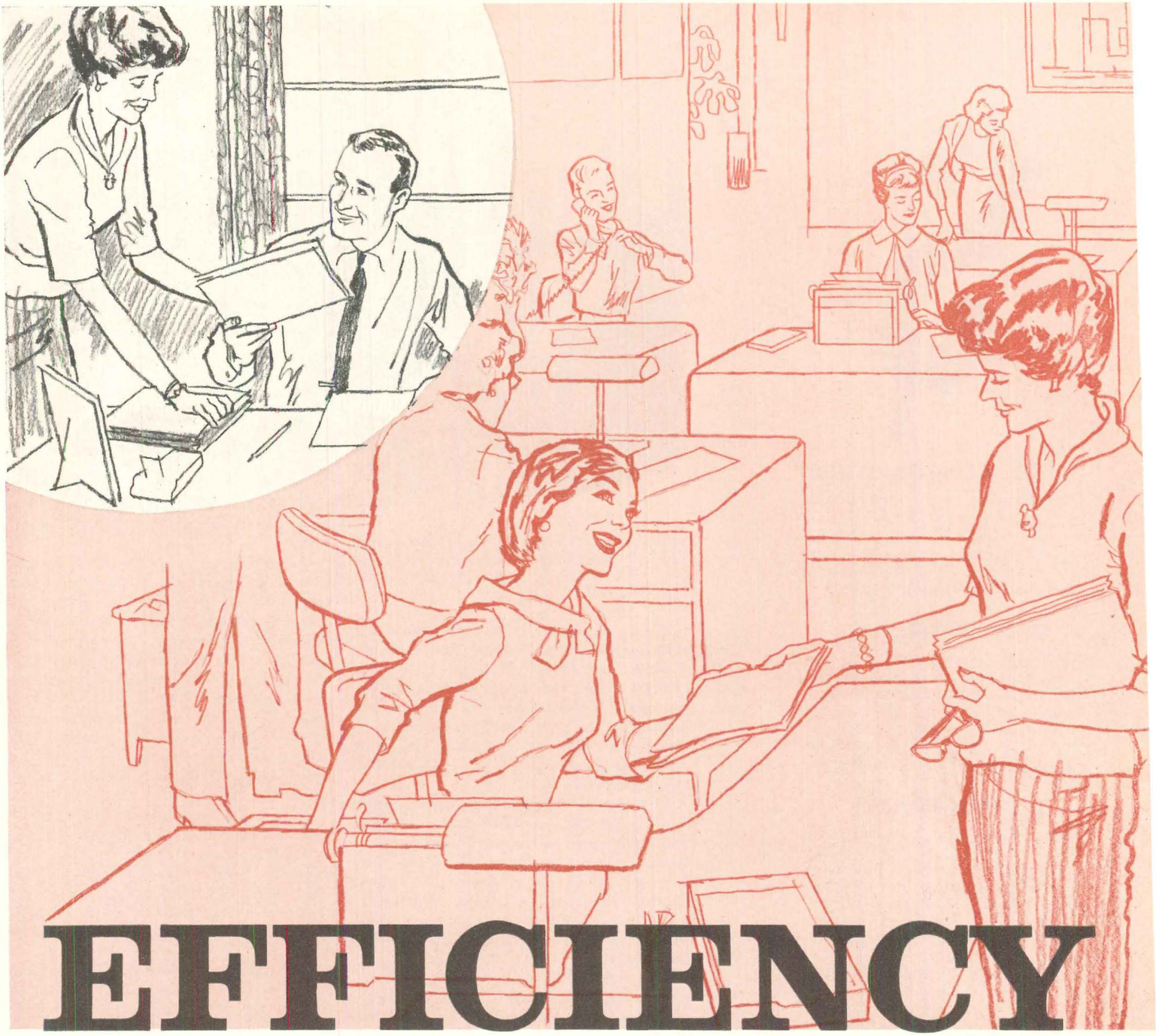
Cullen's "general studies," an important section of the volume, include such headings as squares, closure, change of level, street lighting, the floor, etc., and he follows these with studies of particular English cities. Finally come his proposals for improving relationships in various specific English townscapes.

It should be emphasized that *Townscape* is not a document of folksy visual philosophy, but an intense effort to organize methods and point out solutions for living gracefully in an ever more crowded urban world. Most of the facts are presented as captions to excellent photographs or Cullen drawings. The volume does not bubble over with charm nor scorn. It is an earnest clinical dissection of how the ordinary in architecture can be manipulated to produce rich surroundings.—WALTER MCQUADE

THE METROPOLITAN PROBLEM AND AMERICAN IDEAS. By Luther Halsey Gulick. Lectures delivered at the University of Michigan under the sponsorship of the William W. Cook Foundation. Published by Alfred A. Knopf, 501 Madison Ave., New York 22, N. Y. 168 pp. 6" x 8½". $4.

Dr. Gulick, well-known as the chairman of the board of the Institute of Public Administration and once City Administrator of New York City, has made a distinguished contribution to the understanding of urban problems and the possibility of their solution

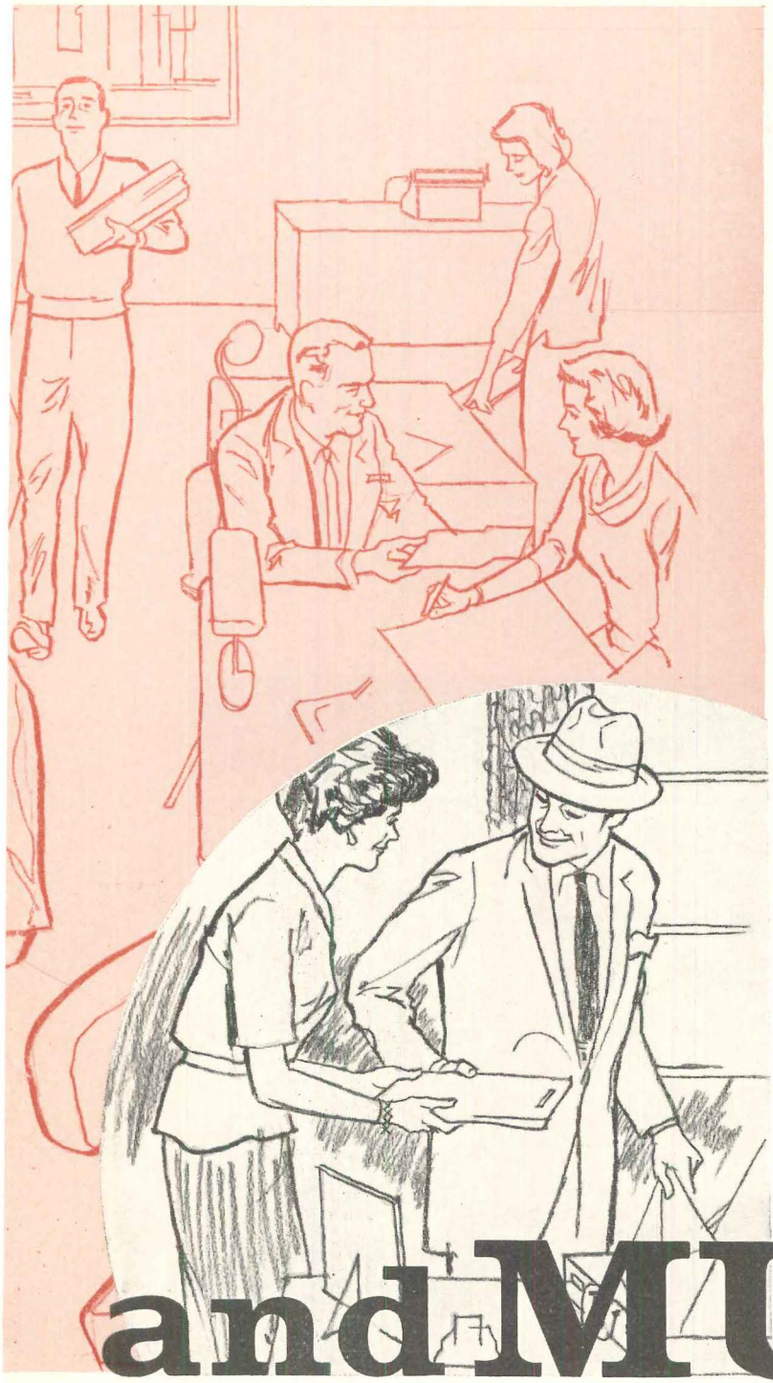
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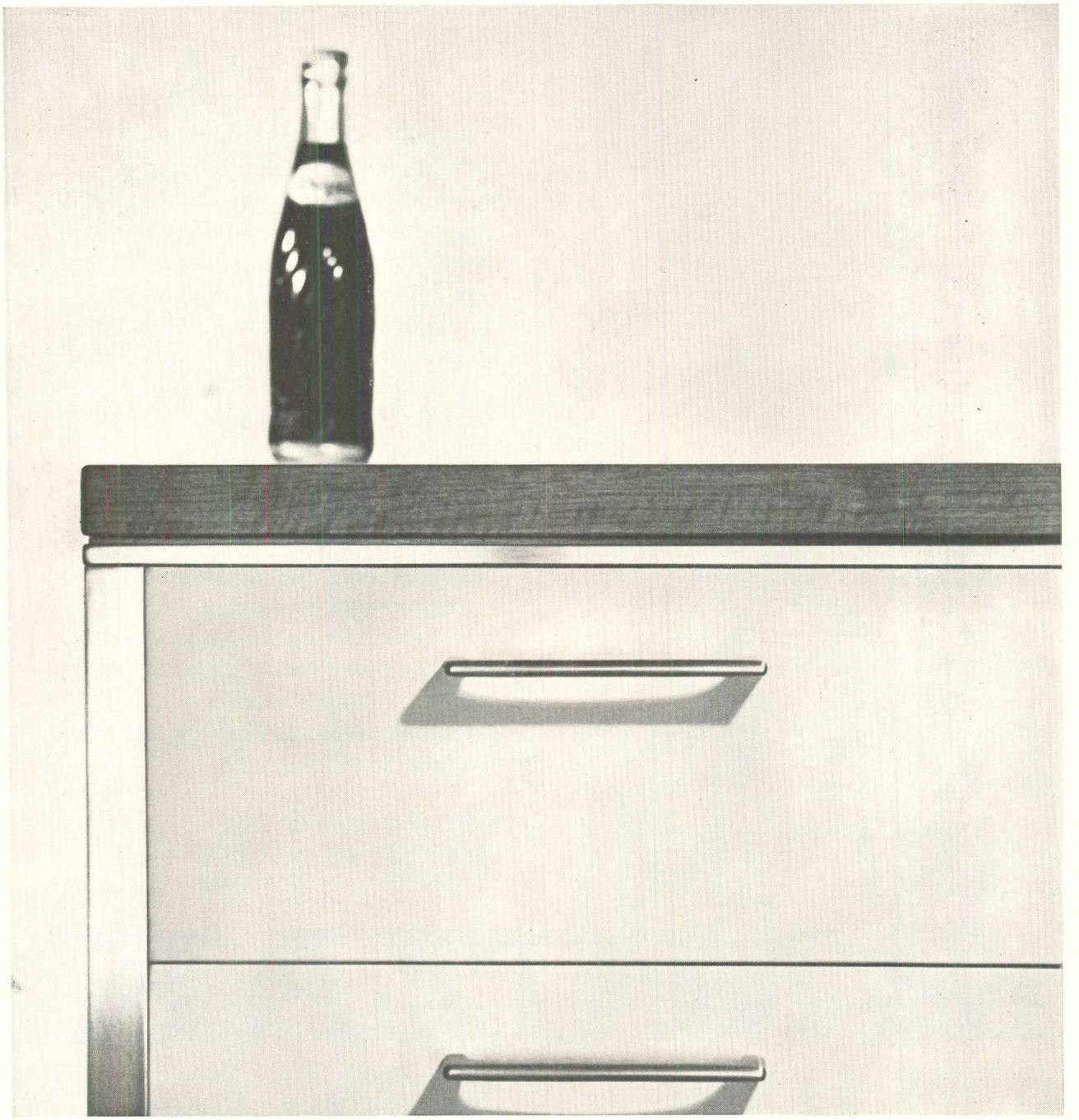
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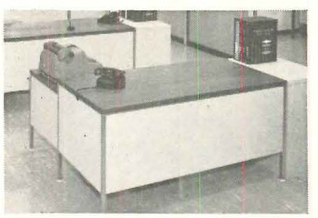
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continued from page 155

through traditional democratic processes. In these few lectures, Gulick effectively delineates how both the market mechanism and traditional forms of local-government organization have failed cities. For the former, its failure shows up in increasing need for land-use controls to insure some semblance of rational development, the unwillingness of private business to build mass transit, or sewer systems, or any of many other needed service facilities, and in the market's failure to modernize obsolete neighborhoods and build middle- and low-income housing.

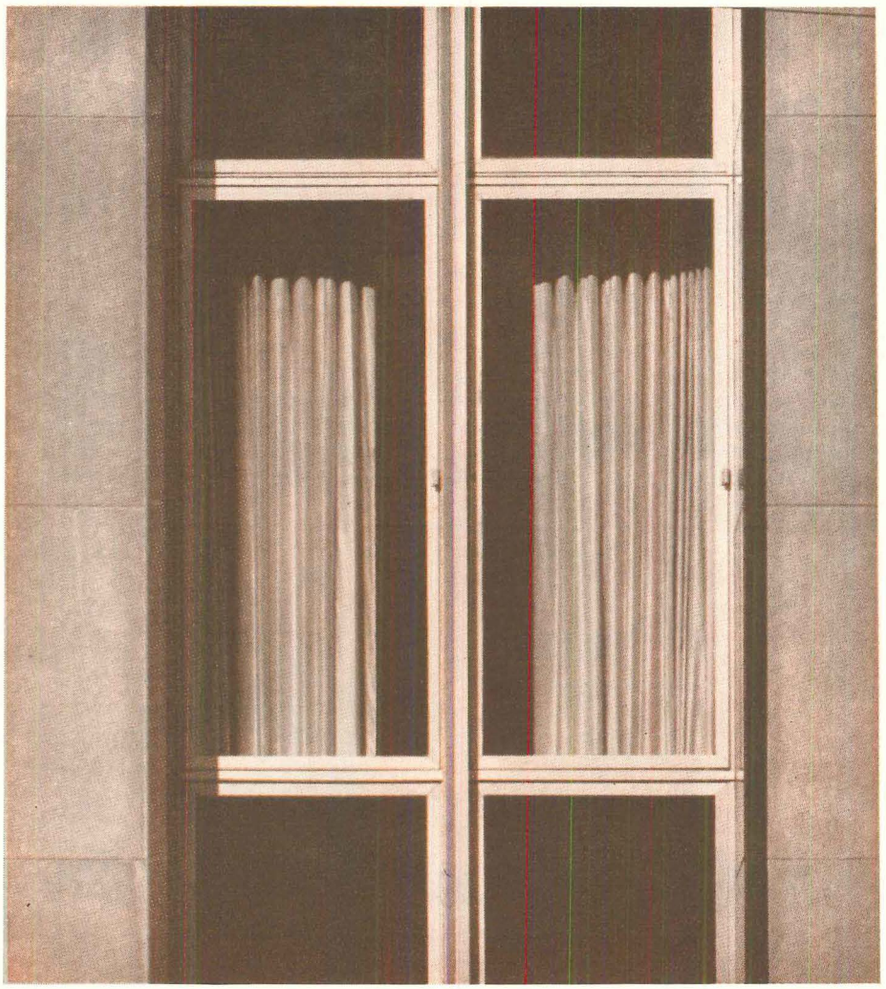
But, at the same time, local governments are not equipped to move into the breach. For one thing, Gulick argues, "existing local tax and revenue situations, with small geographic divisions, are precisely the wrong approach because the costs will often fall in one jurisdiction and the benefits in another."

What Gulick proposes is "an extension of our American constitutional system" with intergovernmental cooperation in attacking all urban problems. This would include the working out of "appropriate assignments for each extension of government, outlining the activities and programs it must undertake . . . ." The first step must come from the federal government. The President, Gulick contends, must make "explicit his commitment to rationalize federal programs as they hit urban areas," and assume responsibility for coordinating units of state and local government. This is a whopping task, far beyond anything envisioned in a Department of Urban Affairs, which is, despite much Congressional and Administrative huffing and puffing, still a dream.

The ultimate objective would be that "extended metropolitan areas should be encouraged to develop as self-governing democracies within the structure of the American federal system." Why this solution rather than simply imprinting a new level of super-government somewhere between the city and state? Because "local leadership . . . is likely to bring out a more vigorous and spontaneous community consciousness."—D.B.C.

THE ARCHITECTURAL INDEX FOR 1961. Edited and published by Ervin J. Bell, 517 Bridgeway, Sausalito, Calif. 62 pp. 5½" x 8½". Paperbound. $5.

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continued from page 103

mendous: After deducting interest (say $567,000 at 5¼ per cent) and mortgage amortization (at, say 1½ per cent annually, or about $162,000) from an estimated net income before depreciation of 10 per cent, of $1.1 million, the builder-sponsor is left with pretax income of $371,000. After corporate income tax, the net income is about $178,000—a yield of almost 90 per cent on his cash investment. To top it all off, the builder can, and generally does, claim depreciation at an accelerated rate on the value of the building, and thus can "shelter" his taxable income to the point where, in the early years of the project at least, his tax is almost nothing.

Attractions and trouble

The attractions of this formula are obvious. But the fact is that—as attractive as the formula may seem—it has yet to be demonstrated that former slum property can always produce the gains the formula promises. For one thing the formula is predicated on a strong demand for the housing—and this does not always develop.

A good example is the Reynolds Aluminum Service Corp. project in Cincinnati. Reynolds built 322 moderate-price units (average cost for the co-ops was $12,300 with down payments as low as $500 and monthly maintenance at $88) in a former Negro slum area. After many months, the project was less than one-third occupied, and Reynolds was worried: it could not turn the project over to the co-operative group until it was 95 per cent occupied, and Reynolds did not want to be frozen into the real-estate management phase of building. Today, the project is about 50 per cent occupied, and the same basic problems remain:

- The project area is too small to "create its own environment" and the total neighborhood still retains the stigma of a slum.
- The vacancy ratio overall is high in Cincinnati, and the Negro market has many more opportunities for better housing than it did a few years ago. Negroes today are looking for areas with higher prestige than the Basin area.
- The area, like many other unsuccessful urban renewal project areas, has a difficult school problem.

Reynolds' executives claim that land prices were too high in the area (they paid about $800 per unit and eventually, after development, costs ranged as high as $1,100); but besides this, there was obviously some miscalculation of the local market. Still, Reynolds believes that, given some time to solve present problems, and with the city working further to improve the whole area, they will at least recapture their investment.

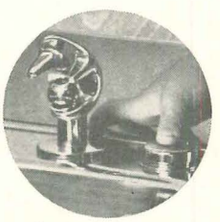
Renewal needs rethinking

The problems Reynolds has had in Cincinnati are typical of projects in Cleveland, Pittsburgh, St. Louis, and Kansas City. The complaints have become well-known: project areas are not large enough, schools are a problem, land prices and building costs produce rentals which are too stiff for the market, the city has not moved fast enough with its own improvements in the project area. In Kansas City, Developer Lewis Kitchen's mortgage on his newest section of the Quality Hill project has become the first Section 220 mortgage to have to be reclaimed by the FHA. The apartments are only 50 per cent occupied, and the mortgagee pressed for full principal payments despite FHA's urgings to accept lower payments on principal. FHA has been successful in doing this in other cases where Section 220 projects were slow in getting started.

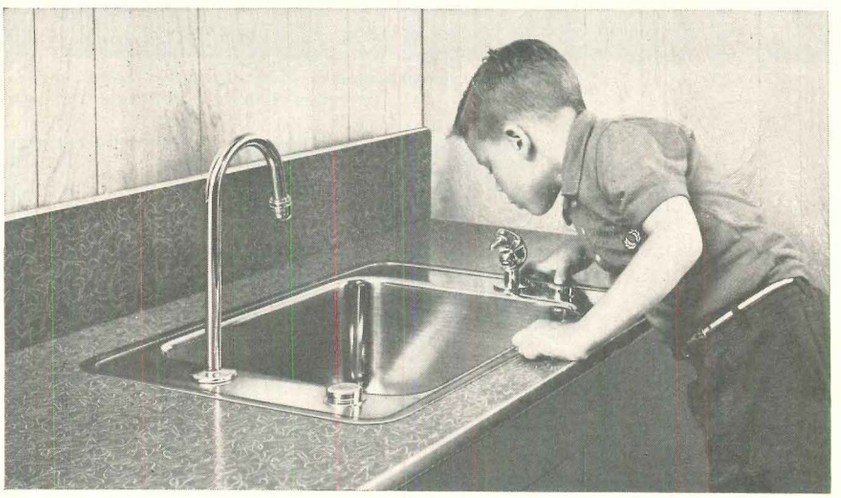
Despite these difficulties, and others, there is increasing interest in urban renewal on the part of redevelopers, particularly at the local level. This, of course, is healthy. The large national operators will tackle the big, glamorous jobs, but most projects must be

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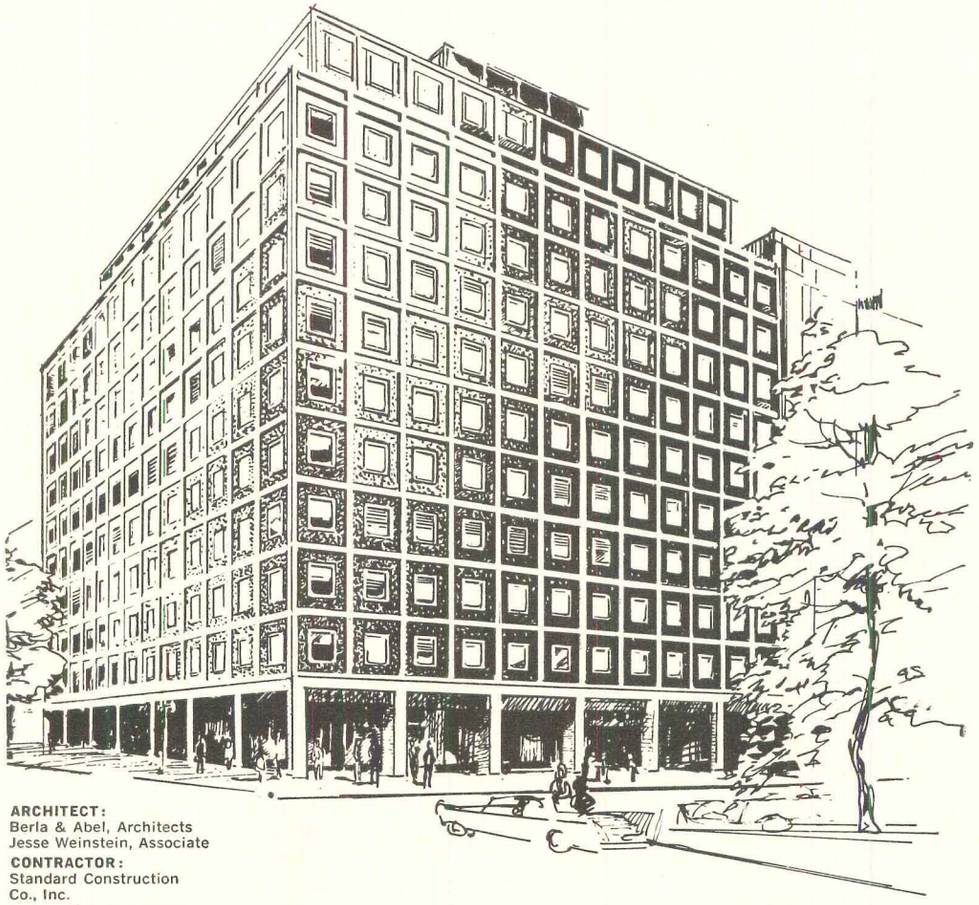


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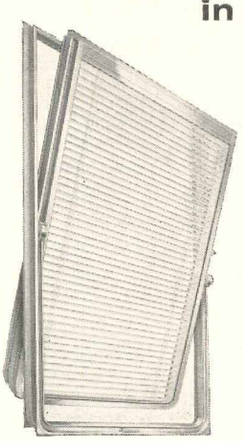
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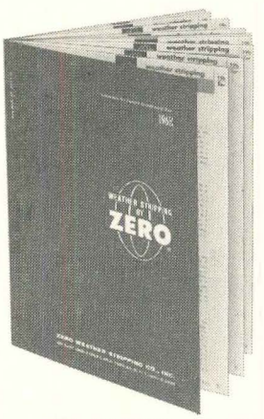
built by local builder-investors.

But the attractive formula still blinds builders—and cities—to reality. In one case, for instance, a city had re-use appraisals made for a potential apartment site, and these showed possible land prices of $130,000 to $160,000. The latter was established as an upset price, and bids were invited. Instead of the three or four bids expected, there were 28 prospective sponsors interested at the upset price, and when sealed bids were finally taken, the top price was $400,000. The winning developer admitted that since FHA treated 220 financing on a cost basis, it was more important for him to get the site than it was to pay a proper price for it. As one appraiser has said, "This illustrates that the leverage of 220 financing is terrific. It makes one wonder whether or not anyone will pay proper attention to land value if they can get such financing."

The misplaced emphasis on land price as the pivotal element in the renewal process is just one lesson still to be learned. Here are some other things that cities and private developers must do to make the public-private partnership work:

- Cities must realize the value of on-site and nearby public improvements and coordinate them fully with the development of new private facilities, particularly in the case of schools and apartments.
- Land prices should be more carefully watched, perhaps through the medium of having the FHA set a maximum price, based on market appraisals, very early in the execution stage of renewal.
- Cities should pay more attention to those areas where the private market can be most easily stimulated to do the job of redevelopment. This does not mean ignoring the city's "worst slums" in favor of flourishing areas of new building; but it does mean examining more carefully the deteriorating areas near healthy parts of the city.
- Cities must be prepared to slow down the renewal process, as well as to speed it up. In some cases, it might be more beneficial to the long-run health of the city to hold land vacant, as has been done in Norfolk, Va., until market forces have sufficiently developed to insure "the highest and best use" for the city.
- By the same token, cities must become more familiar with local market conditions, and realize that new buildings will not by themselves create their own demand. As Economist Winnick says, "The future scale of redevelopment will be determined much less by needs or available resources than by what can be sold to private occupants."
- There is a great need for better planning for commercial and industrial re-use. The potential of the in-city shopping center and industrial park has not yet been plumbed.
- Federal and local agencies must agree on the kind and value of land improvements most urgently needed on renewal sites.
- Finally, much more attention must be paid to esthetic considerations. Not only should this be done by way of design competitions, but also through a greater awareness on the part of FHA, local agencies, and redevelopers of the key role of design in those projects which have been most successful so far—e.g. Lake Meadows and Prairie Shores in Chicago, Washington's Southwest Area projects, and New York's Kips Bay apartments.

As URA Commissioner William L. Slayton has said, "Municipalities must learn that the sale of urban renewal land is far more than a real-estate transaction. If such land is sold with no positive development direction, and if it is sold without consideration as to urban design, then the city has lost its opportunity to use urban renewal as a positive tool for the city's redevelopment." END

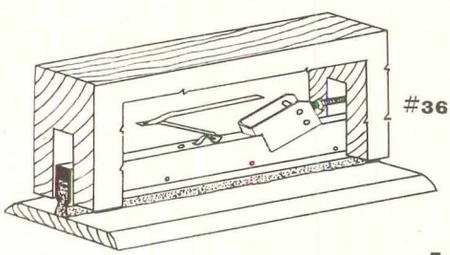


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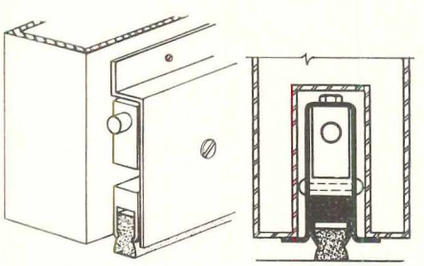
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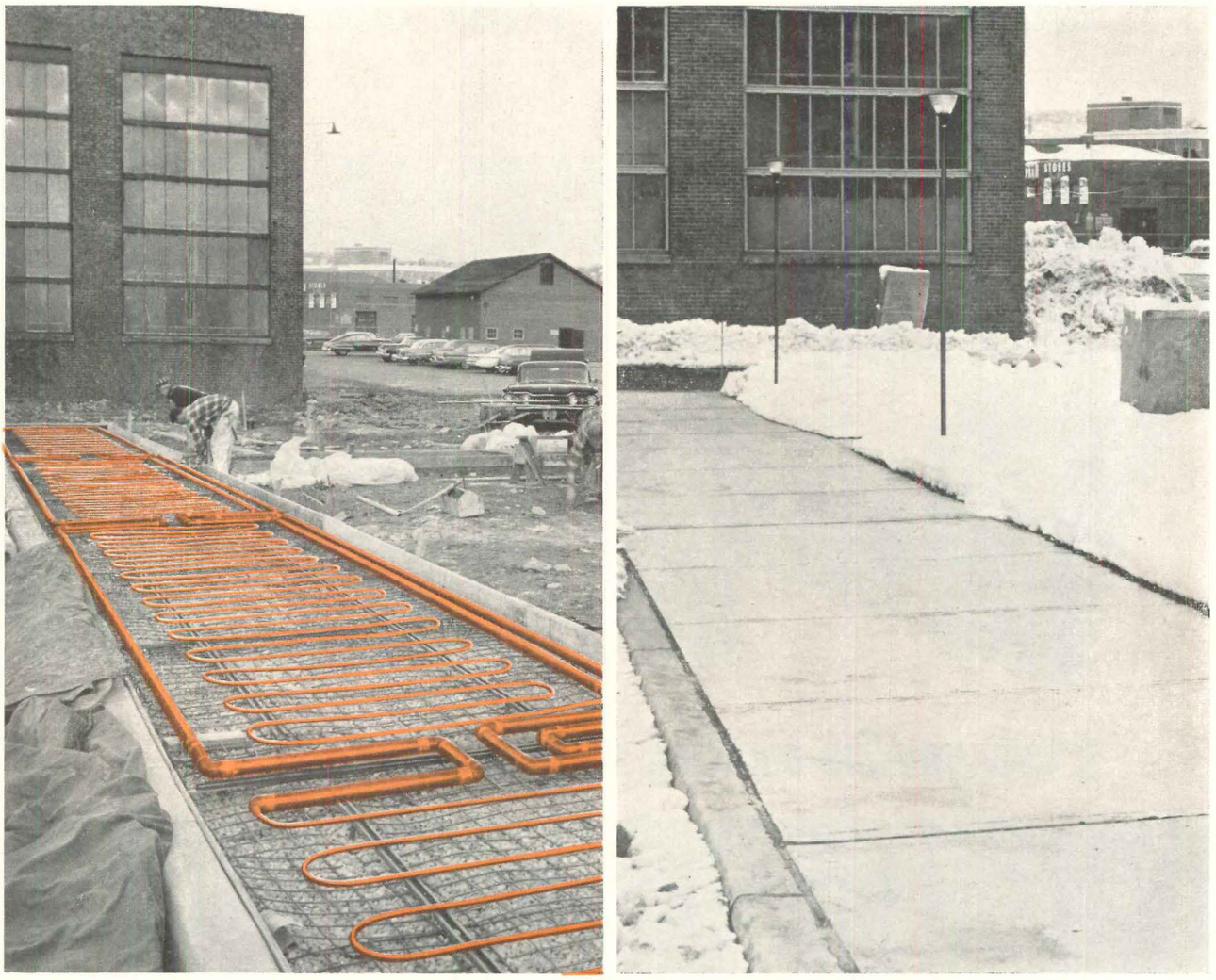
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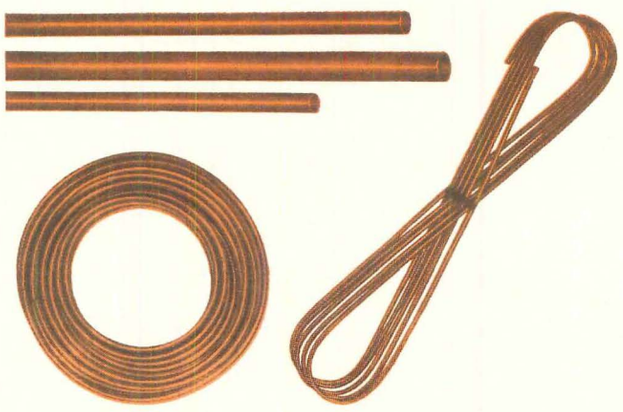
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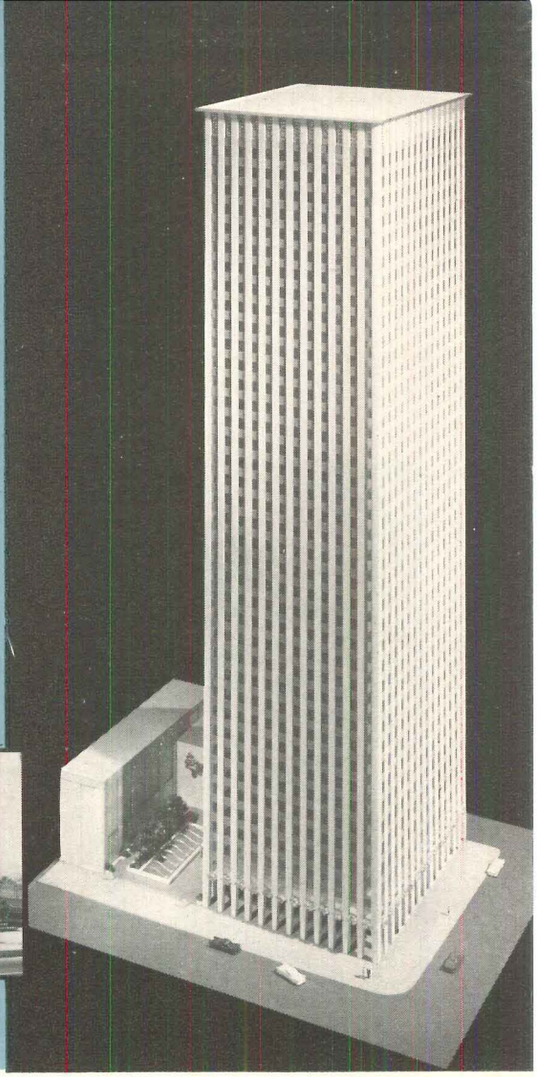
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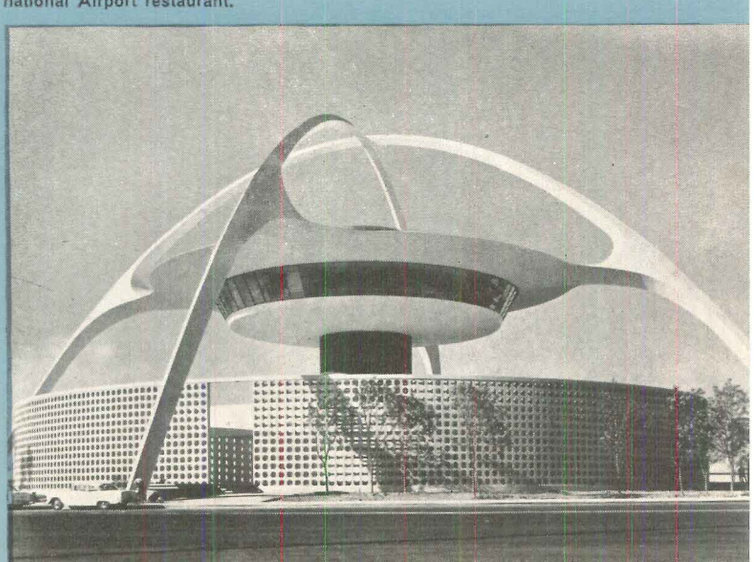
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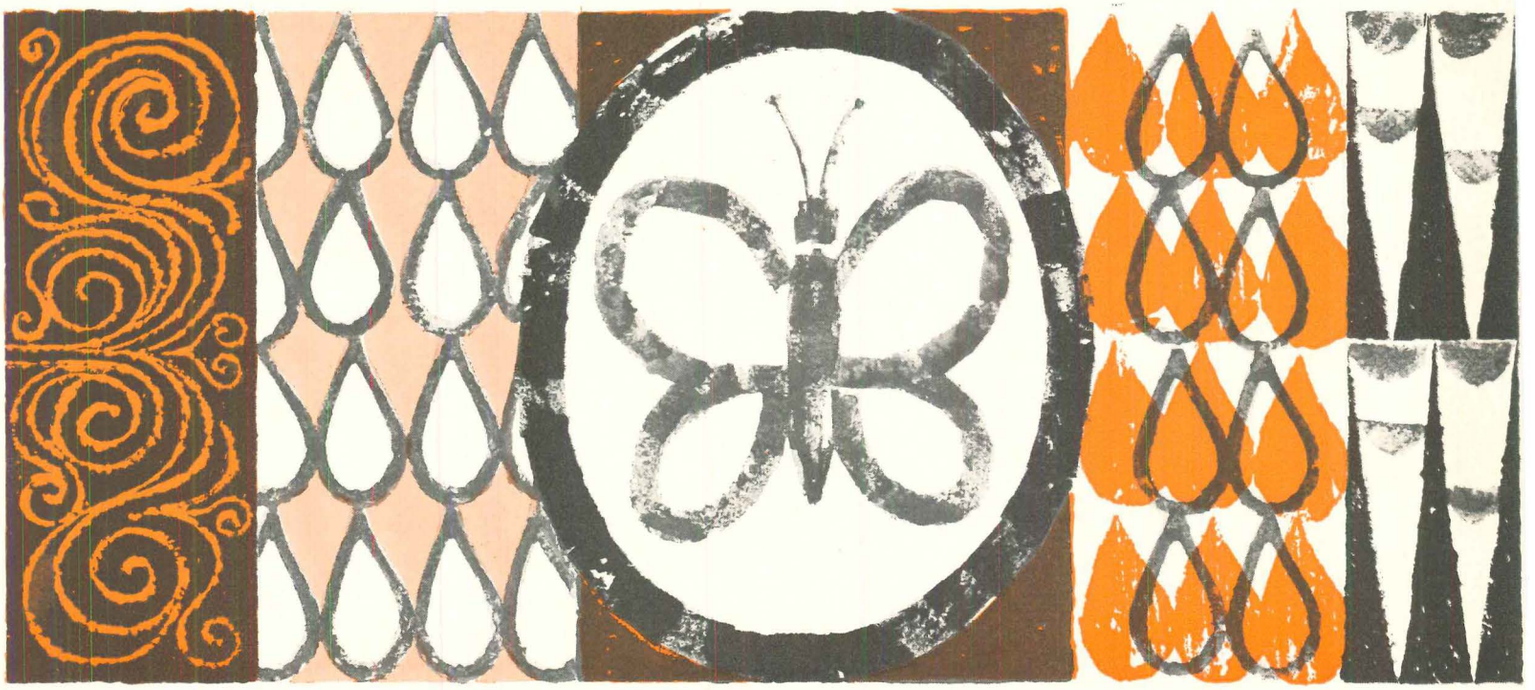
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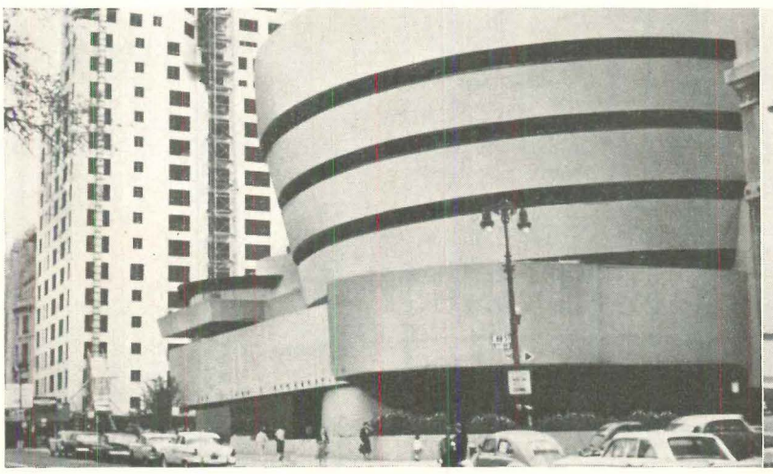
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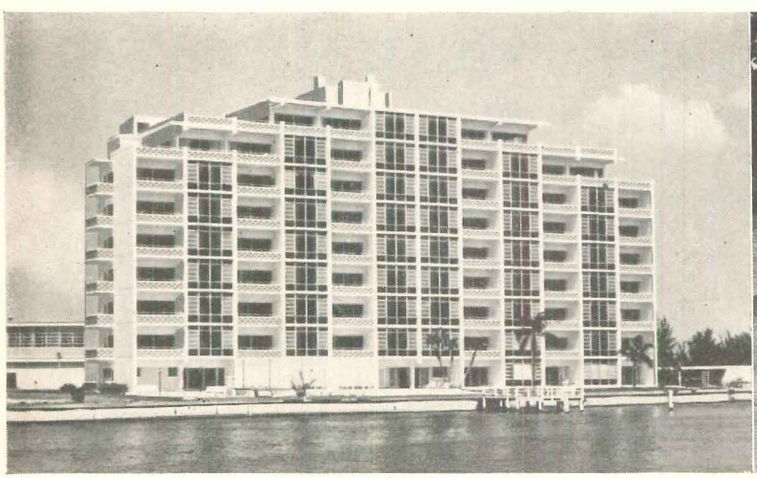
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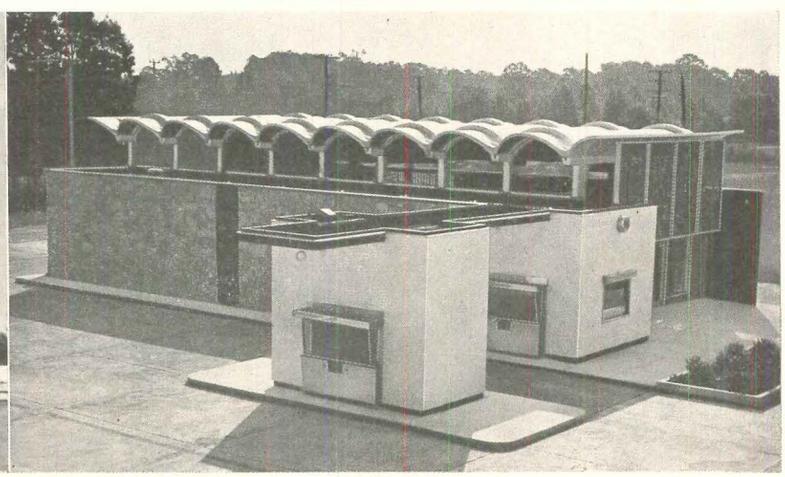
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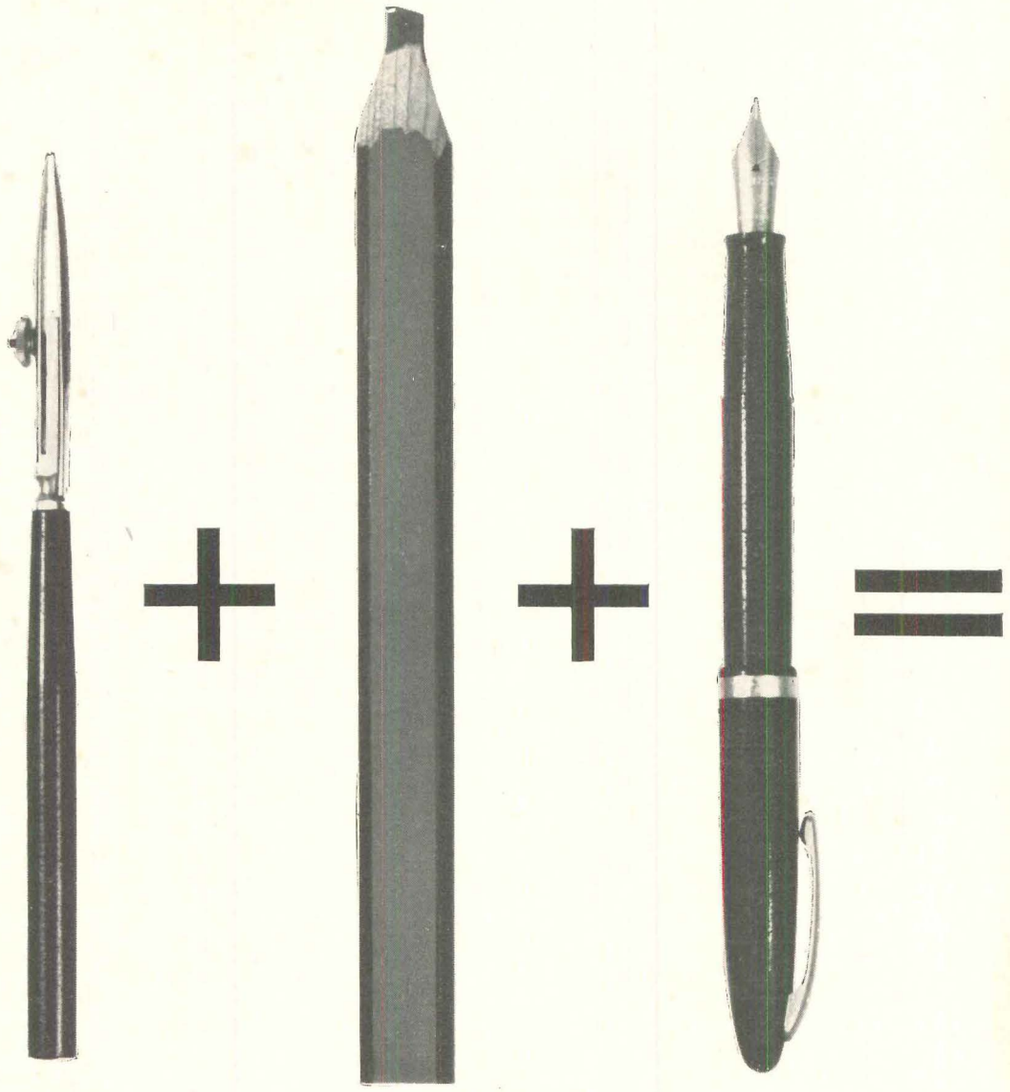
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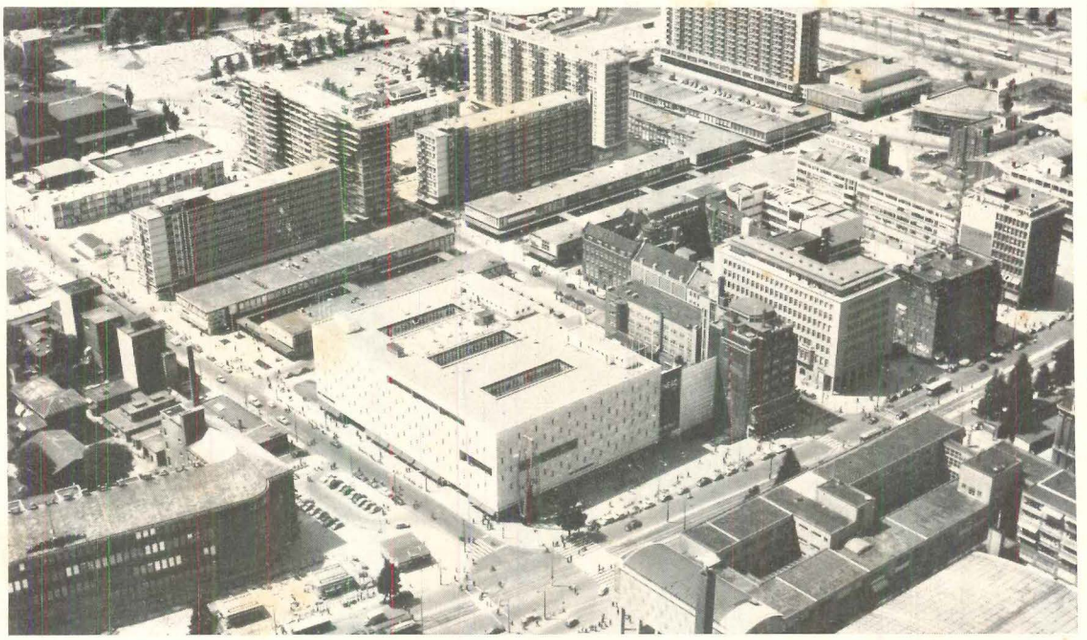
The problem is that each of the three parties approaches the common task of getting the building built from his own point of view. When all three have been reached and when, in turn, all three have reached agreement on a product, 1 + 1 + 1 adds up to "sold".

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IDEAS FROM ROTTERDAM

As everybody knows, in World War II Rotterdam's center, a triangle about a mile long measured along its harbor base, was bombed and burned almost flat. Instead of defeating the city, this caused its rebirth. In rebuilding Rotterdam, Dutch architecture bounced from near the bottom of the European pile to near the top.

One of the most creative acts in the program has been at the very core of Rotterdam: a new plan, new zoning, new architecture, a new trademark for a city center.

Almost everybody has heard of Rotterdam's famous "Lijnbaan" (which means "ropewalk"). This is the midcity shopping center and pedestrian mall, and it is a tremendous success. But in the U.S. nobody yet has described the more comprehensive effect of which the Lijnbaan is a part. Unlike Manhattan, which marks its two core areas ("midtown" and "Wall Street") by two man-made mountain peaks, Rotterdam uses the Lijnbaan like a canal. It is not tall, but low: just two stories high, in fact (running across upper part of photo above). It is flanked to the west by 12-story apartment slabs, and to the east by great monumental building lumps along the Cool Singel, Rotterdam's great wide avenue (seen in the foreground. Cool Singel is now getting a subway to run through under the harbor to new suburbs south of the river).

Marking the core of one of the world's largest harbor cities with something like a "canal" flanked by high "banks" was not only genius: it works.

To the west the apartments along the Karel Doorman Straat include spinal slabs lengthwise to the street, and transverse slabs too, all about 12 stories high; together these do things both practical and esthetic. Esthetically they give the low Lijnbaan its magnificent western backdrop, as seen from within the Lijnbaan area itself. As seen from outside, from the city or from the central railroad station, four of these slabs (which run *transverse* to the street direction) act like phalanxes on the march: they indicate a) the position of the city core; b) its new, far bigger, looser, better scale, as compared to the typical, cramped, old-city pile-up out of which it arose; and, of course, c) the prominence of the residential factor downtown.

The big apartment slabs are woven in with lower ones around a series of courts which produce an effect in depth, and by the same token create pleasant space in which to live, right in the city's heart. And on the opposite side of the Lijnbaan, on the Cool Singel (especially along its eastern front), the parade of lumps is really a progression, all in unified scale and pretty good spacing: a Beaux-Arts city hall, a post office in the early-modern "Amsterdam 1920s romantic" style, a Gropius-modern stock exchange, and various banks and business blocks—not forgetting Breuer's "Beehive" department store (white mass at center). The variety of style and use among these structures makes the street finer than similar streets in classically petrified Washington, D.C.

A QUESTION OF SPACE

In all this work, what modern architecture is attending to—far better than it does in the U.S.—is space. For example, what with all the walking that goes on along the Lijnbaan pedestrian mall, there is an enormous amount of walking along Cool Singel, too, simply because of sidewalks of immense width, shaded by trees. Behind all this width of sidewalk the building line is able to advance and retreat, to the enhancement of the total street effect.

As for the bad things critics say about Rotterdam's "failure" on traffic: all this means is that its plans were made before such later insights as the combined "population" and "auto" explosions, and before Gruen's Fort Worth diagram. The chance to advance with still later insights such as the new Dallas downtown plan remains unimpeded, because the Rotterdam redevelopment has big bones.

But just the same, in the matter of streets, parking, and traffic, Rotterdam has its useful tricks.

For example: kiosks, kiosks, and more kiosks. These constitute a pretty little item of architectural "vocabulary" serving many uses. There is the case, for instance, of the Rotterdamsohe Bank, a block-long building, which was all set and abuilding on the Cool Singel. Its site turned out to be too far back from the street for the new plans, and furthermore, after 4 P.M. the building would have been dark and "dead." So the Planning Department let one café and several little shops be built in kiosks on the sidewalk in front, thus keeping the street active and gay not only for the rest of the afternoon but well into the night. And the kiosks look like real street furniture, not like a clutter of extra building. So too on a street which crosses the Lijnbaan called Kruis Kale, where lots of those apartment dwellers need to stow their cars, all the parking lots were quite properly masked. How? Kiosks again, which the architects used along the front of the parking lot, in place of an ugly wire fence.

Visually the Lijnbaan, as a canal of pedestrians flanked by slabs on one side and lumps on the other, is very nice; but that is not the full meaning it conveys. As planning—while we have been talking of "zoning for mixed uses," each use supporting the others—Rotterdam has long since put the fruitful idea of mixed zoning right to work. City Planner Van Traa, aided by architects like Van den Broek & Bakema, have put together city shopping and city residences, and civic and cultural facilities too, and they have done so not only conscientiously but with joy.

And this can give visiting U.S. travelers a great lift.

Douglas Haskell